



2014


The Greening of Public Private Partnerships: What Design Professionals and Contractors Need to Know for Green Building's Next Legal Frontier

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Recommended Citation

Steedman, Tracy L.; Del Percio, Stephen; and Kimball, Matthew L. (2014) "The Greening of Public Private Partnerships: What Design Professionals and Contractors Need to Know for Green Building's Next Legal Frontier," *University of Baltimore Journal of Land and Development*: Vol. 3: Iss. 2, Article 2.

Available at: <http://scholarworks.law.ubalt.edu/ubjld/vol3/iss2/2>

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SYMPOSIUM ARTICLES

THE GREENING OF PUBLIC PRIVATE PARTNERSHIPS: WHAT DESIGN PROFESSIONALS AND CONTRACTORS NEED TO KNOW FOR GREEN BUILDING'S NEXT LEGAL FRONTIER

By: Tracy L. Steedman
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I. Introduction

America is at a pivotal moment in maintaining and modernizing its public infrastructure. Our nation's roads, bridges, water systems and energy networks have long been in poor repair. Much of the country's public infrastructure was put into place over fifty years ago, and many of these systems are simply overwhelmed or worn out.¹ Infra-

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1. *Report Card for America's Infrastructure*, THE AMERICAN SOCIETY OF CIVIL ENGINEERS (2013) available at www.infrastructurereportcard.org/a/documents/2013-Report-Card.pdf. [hereinafter Report Card]. The American Society of Civil Engineers releases a report every four years that evaluates America's infrastructure in a letter-grade format. *Id.* at 67. The ASCE awarded the nation a "D" in a previous report, published in 2009. *Id.* The most recent 2013 Report Card offers up an overall grade of "D+" across 16 categories, providing some qualified good news that the nation's infrastructure is crumbling a little bit less. *Id.*

structure that is in poor condition or disrepair is mostly a hidden problem until it inconveniently stops working or worse, when ghastly consequences ensue from catastrophic failures.²

The challenge of improving the nation's public infrastructure is daunting. A recent report estimates that the United States needs a capital investment of about \$3.6 trillion by 2020, but that current levels of spending will leave a shortfall of \$1.6 trillion.³ This kind of funding gap is no small matter to bridge for an economy only recently emerging from a deep recession. Indeed, state and local governments, the traditional sponsors of most infrastructure spending, are faced with severe funding constraints that have stimulated a search for new means of addressing current repair and replacement needs as well as future projects.⁴

In addition to finding ways to repair and replace worn out infrastructure to handle existing needs, discussion of an accelerated transformation to a green economy has included the need to build additional infrastructure to facilitate anticipated changes.⁵ Public infrastructure is no longer limited just to construction of roads and bridges.⁶ Broader definitions of infrastructure include pollution abatement, recycling, and mass transportation, all areas of substantial

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2. For example, in May 2013, a 160-foot section of the 58-year-old four-lane steel truss bridge in Mt. Vernon, Washington (about an hour north of Seattle) crumpled sending three cars into the Skagit River. See Kirk Johnson, *Washington State Bridge Collapse Could Echo Far Beyond Interstate*, N.Y. TIMES (May 24, 2013), http://www.nytimes.com/2013/05/25/us/washington-state-bridge-collapse-highlights-infrastructure-needs.html?_r=0. In August 2007, an eight-lane, steel truss arch bridge that carried Interstate 35W across the Mississippi River in Minneapolis, Minnesota, suddenly collapsed, killing 13 people and injuring 145. See NAT'L TRANSP. SAFETY BD., NTSB/HAR-08/03, *COLLAPSE OF I-35W HIGHWAY BRIDGE, MINNEAPOLIS, MN, AUGUST 1, 2007* xiii (2008) available at <https://www.nts.gov/investigation/summary/HAR0803.htm>. In 1990, the federal government had given the bridge a rating of "structurally deficient," citing significant corrosion in its bearings. Approximately 75,000 other U.S. bridges had this classification in 2007. Sharon Cohen & Brian Bakst, *Minn. Bridge Problems Uncovered in 1990*, WASHINGTON POST (Aug. 3, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/08/02/AR2007080200354.html>.
 3. Press Release. Am. Soc. Of Civil Eng'rs. American Society of Civil Engineers Applauds Bennet-Blunt Partnership to Build American Act (Jan. 17, 2014), available at <http://www.asce.org/Press-Releases/2014/American-Society-of-Civil-Engineers-applauds-Bennet-Blunt-Partnership-to-Build-America-Act/>.
 4. State and local governments are responsible for an overwhelming proportion (85 percent) of public infrastructure investment, though the federal government does make a financial contribution through its capital grants to the states. Barry P. Bosworth & Sveta Milusheva, *The Brookings Institution in U.S. Infrastructure Financing: An Evaluation* (Oct. 20, 2011) (unpublished paper), available at <http://www.brookings.edu/research/papers/2011/10/20-infrastructure-financing-bosworth-milusheva>.
 5. *Id.* at 6.
 6. *See id.*

public involvement.⁷ Green buildings are an area of special interest, considering that buildings account for about 40 percent of energy use.⁸ The transformation to a green economy will require increased spending on new technologies, sustainable building materials, design, the retrofitting of existing buildings, and new construction.⁹

How will this nation address the design, construction, operation and maintenance of these critical systems? Infrastructure issues will need to be a high priority in the U.S. Congress and in state houses across the country. Indeed, there are elected officials, engineers, and community leaders who see the problem and are responding to the challenge with creative, innovative financing solutions for our infrastructure needs.¹⁰

One growing trend seen as a means to relieve some of the financial pressures on state and local governments is public-private partnerships (P3s).¹¹ Initially used for traditional infrastructure projects such as bridges and toll roads (*horizontal construction*), federal and state governments are now using this delivery and financing mechanism to construct buildings (*vertical construction*) such as courthouses, universities, cultural centers and hospitals, just to name a few.¹² This trend will necessarily intersect with a corresponding trend among federal and state governments, cities and municipalities, and other public agencies requiring new and renovated public and private construction to be green.¹³ Specifically, of the 34 states authorizing P3 agreements,

7. *Id.*

8. The buildings sector accounted for about 41% of primary energy consumption in 2010, compared to about 28% from the transportation sector and 30% from the industrial sector. U.S. DEP'T OF ENERGY, 2010 BUILDINGS ENERGY DATA BOOK 1-2 tbl. 1.1.3 (2011), available at <http://building-sdatabook.eren.doe.gov/DataBooks.aspx> (hereinafter 2010 Energy Data Book). By 2012, the percentage of total energy used by buildings had dropped to about 40%. See, *Frequently Asked Questions: How Much Energy is Consumed in Residential and Commercial Buildings in the United States?*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/tools/faqs/faq.cfm?id=86&t=1> (last visited May 28, 2013).

9. See Committee on America's Energy Future; National Academy of Sciences; National Academy of Engineering; National Research Council. 2009. *America's Energy Future: Technology and Transformation*

10. See, e.g., Build America Bonds, which are taxable municipal bonds that carry innovative tax credits and federal subsidies for either the bond issuer or the bondholder. Build America Bonds were created under Section 1531 of Title I of Division B of the American Recovery and Reinvestment Act that U.S. President Barack Obama signed into law on February 17, 2009. The program expired December 31, 2010, but over the two years in which the program was in effect, state and local governments issued \$180 billion in new bonds. The Obama administration has proposed to extend the BABs program in future years.

11. See *infra* Part V. A.

12. See *infra* p. 33.

13. See, e.g., Office of the Federal Environmental Executive, *The Federal Commitment to Green Building: Experiences and Expectations*, 2002. See also,

23 states allow P3s for buildings and 21 of those mandate green building.¹⁴

With green government mandates, the push for governments to adopt design/build and integrated project delivery methods¹⁵ and the increased reliance by governments on public-private partnerships, the interaction between mandatory sustainable building practices and P3s is compelling.¹⁶ The ways in which public green building projects are implemented will have a significant impact on the risks associated with them for design professionals and contractors.¹⁷

This article will briefly trace the history of legal issues associated with green building, noting some major cases, issues, and general inflection points, from the perspective of both designers and contractors as major players in the industry. Next, the article will describe federal and state green mandates as a backdrop for examining the legal risks presently faced by design professionals and contractors. This will follow with a discussion of public private partnerships in the United States and an analysis of how the intersection of P3s and green building laws will inform future public construction. The article will conclude with case studies of three green projects that have been achieved through the P3 contracting method, and suggest the types of legal and risk issues that could become more pervasive as the popularity of the P3 delivery model grows.

II. Looking Back

A. Historical Overview of Green Legal Issues

Green building law began to develop as a subsection of construction law in the early 2000s.¹⁸ Prior to 2005, very little was written in either academic journals or trade publications about the legal risks

Stuart Kaplow, *Can Green Building Law Save The Planet?*, 3 U. BALT. J. LAND USE & DEVEL., (forthcoming June 2014).

14. See PPP STATE BY STATE MAP, http://www.agc.org/cs/advocacy/legislative_activity/public_private_partnership/state_by_state (last visited Feb. 2014).
15. See Himal Suranga Jayasena, Nawodanie Shyamen Senevirathna, *Adaptability of Integrated Project Delivery in a Construction Industry*, at 188-95 (2012) available at http://www.academia.edu/1772680/Adaptability_of_Integrated_Project_Delivery_in_a_Construction_Industry See also *The Impact of Collaborative Project Delivery Systems on Disputes and Dispute Resolution Procedures*, presented at the ABA Forum on the Construction Industry's 2012 Annual Meeting, by Catherine Shanks and Danny G. Shaw.
16. See Chris Cheatham, *How Public-Private Partnerships Can Boost Green Building*, GREENBIZ.COM (July 22, 2010) <http://www.greenbiz.com/blog/2010/07/22/how-public-private-partnerships-can-boost-green-building>
17. See GREEN BUILDING: WHAT ARE THE RISKS? <http://www.zurichna.com/internet/zna/sitecollectiondocuments/en/knowledge%20center/whitepapers/real%20estate/green-building-risk.pdf>
18. See B. Stone, Laurie Patsalides, *How Green Building Got its Start*, BRIGHT HUB (May 02, 2011) <http://www.brighthub.com/environment/green-living/articles/51601.aspx>.

associated with green building.¹⁹ Indeed, some suggested that green building itself was just a fad and that legal issues were likely to be straightforward.²⁰ Yet, starting around the middle of the decade, increased murmurs surrounding troubled green building projects led to an increase in commentary on legal risks.²¹ Some background here is helpful.

i. What is green building?

There is no single definition of “green building.”²² In brief, green building can be described as a form of environmentally sustainable design, construction, and operation to minimize environmental impacts, including effects on workers, residents, and occupants.²³ The United States Environmental Protection Agency defines green building as “the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building’s life-cycle from site selection to design, construction, operation, maintenance, renovation and deconstruction.”²⁴ These green buildings, often called high performing buildings, are intended to use less energy than traditional buildings, reduce water consumption, recycle waste, and provide increased comfort and healthier environments for their occupants through improved air quality, increased natural day light, and greater thermal comfort.²⁵ To achieve these goals, designers and builders implement a range of strategies, such as siting the building with south-facing windows, recycling construction waste, and using nontoxic materials.²⁶

19. See Maura K. Anderson, James K. Bidgood, Eugene J. Heady, *Hidden Legal Risks of Green Building*, 84 THE FLORIDA BAR JOURNAL 35 – 40 (2010) available at <http://www.floridabar.org/divcom/jn/jnjournal01.nsf/Author/62D131A5D4F5D767852576D50074D702>.

20. See Sam Kubba, *HANDBOOK OF GREEN BUILDING DESIGN AND CONSTRUCTION, LEED, BREEAM, AND GREEN GLOBES*, 2 (Butterworth – Heinemann 2012).

21. See Greg Hanson, *What Other Cities Can Learn from Seattle’s Troubled “Deep Green” Program*, GRIST.ORG (Aug. 24, 2012, 7:15 AM) <http://grist.org/cities/what-other-cities-can-learn-from-seattles-slow-to-start-deep-green-building-program/>.

22. See Stephanie Vierra, *Green Building Standards and Certification Systems*, WBDG.ORG (Sept. 26, 2011) <http://www.wbdg.org/resources/gbs.php>.

23. See WBDG Sustainable Committee, *Design Objectives-Sustainability*, WBDG.ORG (Sept. 04, 2013) <http://www.wbdg.org/design/sustainable.php>.

24. See DEFINITION OF GREEN BUILDING, <http://www.epa.gov/greenbuilding/pubs/about.htm> (last updated Dec. 19, 2012).

25. See *id.*

26. See, e.g., *University LEED Platinum Law School Building Underway*, SCHOOLCONSTRUCTIONNEW.COM (March 22, 2012) <http://www.schoolconstructionnews.com/articles/2012/03/22/university-baltimore-leed-platinum-law-school-building-under-way>.

ii. Modern History of Green Building.

Although basic green building practices, such as using local and renewable materials and passive solar design, have been in existence for thousands of years, the recent green building movement in America dates back to the 1970s during the oil price hikes and the concomitant fervent environmental movement.²⁷ During that decade, Congress enacted several environmental statutes, including the Water Pollution Control Act, the Clean Air Act, and the National Environmental Policy Act. DDT was banned and the first Earth Day was celebrated (April 22, 1970).²⁸ The environmental disasters at Love Canal and Three Mile Island also occurred in this decade.²⁹

One of the first milestones for the green movement in the United States was the creation in 1990 of the Committee on the Environment by the American Institute of Architects (AIA).³⁰ Austin, Texas was the first city in the United States to establish a local green housing program in 1991.³¹ In 1992, the EPA and the Department of Energy launched the Energy Star® program.³² Several green ideas saw fruition during the Clinton Administration, including the Greening of the White House starting in 1993.³³ President Clinton also issued executive orders charging federal agencies to assess and reform their building practices and management to incorporate environmentally-friendly sustainable practices.³⁴ This period also saw the formation of the U.S. Green Building Council (USGBC) in 1993 which, in 1998, released the first version of its Leadership in Energy and Environmen-

27. *Id.*; see also Sara Smith, *A Brief History of the Modern Green Movement in America*, WEBECOIST, <http://webecoist.com/2008/08/17/a-brief-history-of-the-modern-green-movement> (last visited Mar. 1, 2011).

28. Smith, *supra* note 27.

29. *The World's Worst Environmental Disasters Caused by Companies*, BUSINESS PUNDIT (June 21, 2010) <http://www.buisnesspundit.com/the-worlds-worst-environmental-disasters-caused-by-companies>. The following decade saw a reactor explosion at the nuclear power plant in Chernobyl, Russia in 1986, and the Exxon Valdez oil-spill disaster in 1989, among other notorious events. *Chernobyl Nuclear Disaster*, THE COLD WAR MUSEUM, <http://www.coldwar.org/articles/80s/ChernobyNuclearDisasterApril261986.asp> (last visited May 3, 2014).

30. Kira Gould, *AIA/COTE: A History Within a Movement*, THE AMERICAN INSTITUTE OF ARCHITECTS, available at <http://www.aia.org/practicing/groups/kc/AIAS077347> (last visited April 23, 2014).

31. *M Station: Green and S.M.A.R.T. Housing in Austin's TOD District*, THE EDGE PD&R http://huduser.org/portal/pdredge/pdr_edge_inpractice_120712.html (last visited April 23, 2014).

32. History of Green Building, THE HISTORY CALENDAR, <http://www.thehistory-calendar.com/history-of-building-green.html> (last visited Mar. 1, 2011).

33. *Green of the White House*, CBSNEWS (Dec. 2, 1999) <http://www.cbsnews.com/news/greening-of-the-white-house/>

34. *White Paper on Sustainability: A Report on the Green Building Movement*, BUILDING DESIGN & CONSTRUCTION, 4-6, Nov. 2003, available at <http://www.usgbc.org/Docs/Resources/BDCWhitePaperR2.pdf>.

tal Design (LEED®) green building rating system.³⁵ The Green Building Initiative introduced its rating system in the United States in 2004, known as Green Globes.³⁶

In addition to rating systems, new model building codes have been published and implemented.³⁷ For example, the International Construction Council promulgated a model code that includes sustainability measures for the entire construction project and its site - from design through construction, certificate of occupancy and beyond.³⁸ The International Green Construction Code, also known as the IgCC, creates a framework establishing minimum green requirements for buildings and complementing voluntary rating systems, which may extend beyond the baseline of the IgCC.³⁹ The IgCC serves as an overlay for other codes and is in use or has been adopted in 10 states.⁴⁰

B. Notable Inflection Points in Green Building.

Several events are noteworthy in signifying important changes or “inflection points” in the conversation about the risks associated with green building for design professionals and contractors.⁴¹ These inflection points marked significant shifts from past industry practices in the way that green and sustainable design and construction risks were analyzed and presented.⁴² Several of these key events are noted below.

i. 2007 CNA’s Green Building Project Claims Summary.

At the 2007 AIA National Convention in San Antonio, Texas, in a presentation titled “Don’t Let Green Design Cause Red Ink,” CNA Insurance’s Frank Musica revealed what was to that date the most com-

35. See, www.usgbc.org. Several rating systems exist but a comprehensive discussion of each is beyond the scope of this article. For a discussion of rating systems, codes and standards, see also, Stuart Kaplow, *Can Green Building Law Save The Planet?*, 3 U. BALT. J. LAND & DEVEL. 131 (2014).

36. Green Globes, *About Green Globes*, <http://www.greenlobes.com/about.asp> (last visited April 23, 2014).

37. International Code Council, International Green Construction Code, <http://www.iccsafe.org/cs/IGCC/Pages/default.aspx> (last visited April 23, 2014).

38. *Id.*

39. Tracy Steedman, *International Green Construction Code: Not Just Another Layer*, 2x4x10, 2-3 (2012) available at <http://meetings.abanet.org/webupload/commupload/CI110000/newsletterpubs/2x4x10Spring2012.pdf>

40. See International Green Construction Code Adoption Map 2014), available at <http://www.iccsafe.org/gr/Pages/adoptions.aspx>

41. Emily Bagder, *Why are Some States Trying to Ban LEED, Green Building Standards?*, THE ATLANTIC CITIES PLACE MATTERS, (Aug. 28, 2013) <http://www.theatlanticcities.com/designs/2013/08/why-are-some-states-trying-ban-leed-green-building-standards/6691/>

42. *Id.*

prehensive survey of claims arising out of green building projects.⁴³ Each claim - the parties remained anonymous during the presentation - had actually been reported to CNA by one of its insureds.⁴⁴ The types of claims reported were broad. For example, in promoting a project, an owner made representations about the benefits of LEED-certified office space.⁴⁵ After renting the space, the tenant noted increased sick leave amongst its employees and demanded a rent rebate from the owner.⁴⁶ The owner brought a claim against the architect.⁴⁷ Another claim arose when green building legislation applying to a project changed during the course of the project.⁴⁸ The owner brought suit against the architect for the costs of the redesign associated with compliance.⁴⁹ In another, an architect was "impressed" with promotional materials for green building products that were not available.⁵⁰ The project was consequently delayed, and the owner sued the architect.⁵¹

This presentation essentially laid the groundwork for green building law as it exists today. Indeed, much of the risk management performed during front-end contract negotiations for green building projects is still informed by Mr. Musica's important work profiling these claims.

ii. *Southern Builders v. Shaw Development* – First Green Building-Related Litigation

The first known green building lawsuit, initially a simple mechanics' lien action filed in 2008, is an example of claims arising out of the failure to comply with a green building regulatory regime.⁵² In *Southern Builders v. Shaw Development*,⁵³ the general contractor agreed to build a \$7.5 million, 23-unit condominium project that was designed to obtain LEED Silver certification.⁵⁴ The pursuit of a LEED rating was critical to the project because the owner had qualified for a green

43. A copy of Mr. Musica's presentation is available at *Don't Let Green Design Cause Red Ink* (2007) <http://www.greenbuildinglawupdate.com/uploads/file/Musica%20AIA%20Slideshow.pdf>

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. Musica, *supra* note 43.

51. *Id.*

52. Chris Cheatham, *A First Look at Green Building Litigation: Southern Builders v. Shaw Development*, WTHFU (winter 2008-09) <http://www.wthf.com/news/A-First-Look-at-Green-Building-Litigation:-Southern-Builders-v.-Shaw-Development>

53. *Id.*

54. *Id.*

building tax credit equal to eight percent of the project cost.⁵⁵ In addition to obtaining a LEED Silver rating the tax credit program required that the project be completed by a date certain.⁵⁶ When the contractor failed to deliver a certificate of occupancy within the time required under the green building tax credit program, the owner forfeited more than \$600,000 in tax credits.⁵⁷

The contractor, Southern Builders, was not paid and filed a mechanics' lien action.⁵⁸ Shaw Development, the owner, counterclaimed, alleging breach of contract and negligence against the contractor, claiming damages which included the amount of the lost tax credit.⁵⁹ Relying on the contract (a modified version of the AIA A101 and A201-1997 documents), the owner claimed that the contractor's failure to construct the building in accordance with the LEED rating system requirements and failing to complete the project within the completion deadline caused its damages.⁶⁰

The case ultimately settled out of court, but it served as the basis for speculation on future litigation and also how to avoid the (then) novel risks related to green building.⁶¹ The contract in *Shaw Development* did not expressly include or delegate green responsibilities to the contractor but the project manual stated that the "project was designed to comply with Silver Certification level [according to LEED]."⁶² The owner alleged that it was this language that obligated the contractor to provide a certified building, but the language did not specifically require the contractor to do anything over and above its usual obligations of constructing the project in accordance with the plans and specifications.⁶³

After the reporting of this case, the legal community predicted an onslaught of green-related construction cases.⁶⁴ This prediction did not become reality, but it did spawn the "greening" of contracts, i.e., revising contracts to address the on-going risks of green construction that were not addressed in the AIA or other industry forms at the

55. *Id.*

56. *Id.*

57. See Counterclaim at 4, *Southern Builders, Inc. v. Shaw Dev. LLC*, No. 19-C-07-011405 (Md. Cir. Ct. 2008).

58. Stephen Del Percio, *Shaw Development v. Southern Builders: The Anatomy of America's First Green Building Litigation*, gbNYC, <http://www.greenbuildingsnyc.com/2008/08/20/the-anatomy-of-americas-first-green-building-litigation/> (last visited Apr. 23, 2014).

59. See Counterclaim, *supra* note 57.

60. See Counterclaim, *supra* note 57.

61. See Stephen Del Percio, *supra* note 58.

62. Counterclaim, *supra* note 57 at 32.

63. See Counterclaim, *supra* note 57.

64. See Stephen Del Percio, *supra* note 58; see also Ujjval K. Vyas & Edward B. Gentilcore, *Growing Demand for Green Construction Requires Legal Evolution*, THE CONSTRUCTION LAWYER, no. 3, Summer 2010.

time.⁶⁵ Today, numerous industry organizations, including AIA, ConsensusDocs, and DBIA, offer green-specific design and construction contracts as part of their suite of form documents.⁶⁶

iii. Northland Pines High School Certification Challenge

The Northland Pines High School ("NPHS") certification challenge may ultimately be remembered as the high water mark of controversy regarding green building construction law.⁶⁷ No complaint or challenge - other than, perhaps, Henry Gifford's star-crossed federal lawsuit discussed below - has received more attention or discussion in green building legal circles.⁶⁸

In December of 2008, a group of Wisconsin residents filed a complaint with USGBC that challenged the award of LEED Gold certification to NPHS.⁶⁹ The school was completed in 2006 and had earned LEED for New Construction Version 2.1 Gold certification in May of 2007.⁷⁰ The complaint alleged that the school's design had failed to satisfy certain Energy & Atmosphere prerequisites which were necessary for the school to earn any level of LEED certification.⁷¹ It also alleged that the residents had objected to the school's HVAC system during the design phase and that an alternative, more efficient system ought to have been specified by the project's designers.⁷² On this basis, the complaint argued, the USGBC was required to revoke the school's LEED rating.⁷³

The USGBC investigated the resident-appellants' allegations and ultimately upheld the school's LEED Gold certification, stating that

65. See, e.g., Contract Documents, *Sustainable Projects Guide*, THE AMERICAN INSTITUTE OF ARCHITECTS, <http://www.aia.org/contractdocs/aiab093903> (last visited Apr. 23, 2014); see also ConsensusDocs Guidebook, ConsensusDocs 310 – *Green Building Addendum*, CONSENSUSDOCS, https://www.consensusdocs.org/Resource_/FileManager/310_Guidebook_08_12_13.pdf (last visited Apr. 23, 2014).

66. See *id.*; see also Stephen Del Percio, *Remedies in Review: DBIA's Sustainable Project Goals Construction Contract Exhibit*, GREEN R.E. LAW J., <http://www.greenrealestatelaw.com/2010/04/remedies-in-review-dbias-sustainable-project-goals-construction-contract-exhibit/> (last visited Apr. 23, 2014).

67. See Lawrence G. Spielvogel, Inc., *Appeal of LEED Certification*, <http://www.greenbuildinglawblog.com/uploads/file/2%20Complete%20NPHS%20Appeal.pdf> (last visited Apr. 23, 2014).

68. See Stephen Del Percio, *supra* note 58; see also Vyas & Gentilcore, *supra* note 64; but see Stephen Del Percio, *Breaking: Henry Gifford Leads Class Action Lawsuit Against USGBC in Southern District of New York*, GREEN R.E. LAW J., <http://www.greenrealestatelaw.com/2010/10/breaking-henry-gifford-leads-class-action-lawsuit-against-usgbc-in-southern-district-of-new-york/> (last visited Apr. 23, 2014).

69. Lawrence G. Spielvogel, Inc., *supra* note 67.

70. See *id.*

71. See *id.*

72. *Id.*

73. *Id.*

USGBC [has] concluded its review of a challenge to the certification of a Gold LEED for Schools . . . In the process of its review, USGBC engaged two extraordinarily qualified engineering consultants . . . to review the technical merits of the prerequisites and credits in question. Further, USGBC staff performed a site visit of the school. After an exhaustive review of the final engineering reports and documentation submitted by NPHS, USGBC concluded that there was sufficient evidence to show that the school's prerequisites and credits had been met. Thus, no adverse action will be taken as to the LEED certification of NPHS. Challenges to LEED certification advanced in the future will be undertaken by GBCI; the challenge to NPHS was reviewed by USGBC as a legacy project.⁷⁴

The Northland Pines challenge and subsequent decision from USGBC was significant for several reasons. First, it is the only reported instance of an actual challenge to a project's LEED-certified status brought by a third party or parties, which is noteworthy because many commentators have raised concerns that a spate of "decertifications" could wreak havoc on contract language, professional liability, and other risk management issues for design professionals participating on green building projects.⁷⁵ Second, USGBC's review of the complaint as a legacy LEED project - rather than initiating the review through the Green Building Certification Institute (GBCI) - sparked discussion about the organization's certification challenge policy and how future challenges, if any, would be handled through GBCI.⁷⁶ Yet to date, no additional challenges have been reported.⁷⁷ Finally, some have opined that USGBC's willingness to dismiss the complaint without further analysis or discussion beyond what is printed above suggested that the specter of LEED decertification was a red herring, rather than a legitimate threat from USGBC, particularly in light of the organization's goals and mission.⁷⁸

74. See Chris Cheatham, *USGBC Stands By Its LEED Challenge Decision*, GREEN BUILDING LAW UPDATE, June 10, 2010, available at <http://www.greenbuildinglawupdate.com/2010/06> (last visited Aug. 9, 2013).

75. See Bradley S. Carson, *Risk of Decertification Looms Large for Real Estate*, SAN ANTONIO BUS. J., Jan. 24, 2010, available at <http://www.bizjournals.com/sanantonio/stories> (last visited Aug. 9, 2013).

76. *Id.*; see e.g. Timothy R. Hughes, *GBCI Changes the LEED Challenge Process*, http://midatlantic.construction.com/opinions/construction_law/2010/1201_ChallengeProcess.asp (Dec. 1, 2010).

77. Hughes, *supra* note 76.

78. Carson, *supra* note 75.

iv. *Gifford v. U.S. Green Building Council* – Challenge to LEED Rating System

In *Gifford v. USGBC*,⁷⁹ for the first and only time to date, design and engineering professionals challenged the validity of the LEED system as a whole – as opposed to its application on a single project as in NPHS. The design and engineering professionals' key argument was that USGBC falsely advertised that buildings rated under the LEED rating system save energy as compared to non-LEED-rated buildings.⁸⁰

In October 2010, Henry Gifford and his company, Gifford Fuel Savings, Inc., filed a federal class action lawsuit against the USGBC in the Southern District of New York, alleging violations of the Lanham Act, RICO, Sherman Anti-Trust Act, and New York state law.⁸¹ The plaintiffs however could not get over the class certification hurdles.⁸²

Gifford, his company, and the other co-plaintiffs, consisting of professionals in the design and engineering industry, amended the complaint in February 2011 and limited its causes of action to violations of the Lanham Act and a similar New York law.⁸³ Essentially, Gifford alleged that USGBC engaged in, among other things, deceptive trade practices, false advertising, and antitrust activities by exaggerating the LEED rating system's ability to deliver the energy efficiency and savings to building owners.⁸⁴ Gifford claimed \$100 million dollars in damages, cessation of USGBC's alleged deceptive practices, and payment of legal fees.⁸⁵

The substance of the complaint was based on Gifford's analysis of a study conducted by the New Buildings Institute (NBI) in 2008 that compared predicted energy use with actual energy use in LEED-certified buildings.⁸⁶ The NBI study concluded that the LEED-certified buildings it analyzed were twenty-five to thirty percent more energy efficient compared to the national average.⁸⁷ Gifford, in contrast, concluded that LEED buildings consumed twenty-nine percent more than the national average.⁸⁸ He further claimed that the NBI results were misleading because the NBI study had compared median (the

79. *Gifford v. USGBC*, No. 10 CV 7747, 2010 WL 4087620 (S.D.N.Y. Aug. 16, 2011).

80. *Id.*

81. *Id.*

82. *See id.* The hurdles to class certification are: numerosity; commonality, typicality, and fair and adequate protection of the interests of the class. *See* FED. R. CIV. PROC. 23.

83. *See Gifford* 2011 U.S. Dist. Lexis 92625

84. *Id.*

85. *Id.*

86. Nadav Malin, *Lies, Damn Lies, . . . (Another Look at LEED Energy Efficiency)*, BuildingGreen. Com (Sep 2, 2008), <http://www2.buildinggreen.com/blogs/lies-damn-lies-and-another-look-leed-energy-efficiency>.

87. *Id.*

88. *Id.*

middle point) energy use of LEED buildings to mean (average) energy use of non-LEED buildings.⁸⁹

Gifford also claimed that although USGBC represents itself as a third-party verification system to improve building performance, it does not verify or require verification of the data submitted with the LEED application, nor does it require actual energy use data.⁹⁰ The use of the term “verification” is false, he alleged, and was intended to mislead consumers and monopolize the market for energy efficient building design.⁹¹ Gifford relied on the Northland Pines High School certification challenge as evidence.⁹²

In what can only be characterized as a flair for the dramatic, Gifford quoted the public statement released by the individuals who had served on the NPHS building committee:

On behalf of the taxpayers of Vilas County who would like to know with certainty whether they got what they paid for or not, we ask the engineering community to look at this file and tell us, did we miss something here? How can it be all right to certify a building that doesn't fully comply with the rules set forth by the body that is doing the certifications?⁹³

For the court, the relevant question became how Gifford was damaged by USGBC's “false” claims.⁹⁴ The USGBC filed a motion to dismiss, asserting that the Plaintiffs had no standing to assert a Lanham Act claim.⁹⁵ The court agreed and dismissed the federal claim with prejudice and dismissed the state law claims without prejudice.⁹⁶

In its motion, the USGBC noted that Gifford “had been a longtime gadfly, preoccupied with critiquing USGBC and LEED through the media, internet forums, and the like.”⁹⁷ For example, and as the court noted, on the first page of Henry Gifford's website, is the site's Mission statement, a description of Gifford's background, and the title to the article he wrote: “Why LEED Buildings Use More Energy Than Comparable Buildings, and How To Avoid the Same Results (in jurisdictions where LEED is not required by law).”⁹⁸ This article formed the basis for his lawsuit.⁹⁹

89. *Id.*

90. *Gifford*, 2010 WL 4087620, at * ¶ 61.

91. *Gifford*, 2010 WL 4087620, at * ¶ 61.

92. *Id.*

93. *Gifford*, 2010 WL 4087620, at * ¶ 62.

94. *Gifford*, 2011 WL 4343815, at * 2.

95. Stephen Del Percio, *Henry Gifford Files Opposition to USGB's Motion to Dismiss Amended Complaint*, GREEN REAL ESTATE LAW JOURNAL (May 5, 2011), <http://www.greenrealestatelaw.com/2011/05/henry-gifford-files-opposition-to-usgbcs-motion-to-dismiss-amended-complaint/>.

96. *Gifford*, 2011 WL 4343815 at* 4.

97. *Id.*

98. *Henry Gifford's Personal Website*, EnergySavingScience.com, <http://www.energysavingscience.com/> (last visited April 25, 2014).

99. *Id.*

Gifford's complaint does have relevance for design professionals and contractors, despite the court's failure to decide the case on its merits. It should serve as a reminder to green builders and design professionals that they should avoid overstating the benefits of green design and building services.¹⁰⁰ The case has also raised questions about LEED's reliability.¹⁰¹

In fact, in the wake of this case some state and local governments, have questioned, and in some cases rejected, the reliability of LEED certification.¹⁰² While LEED served as the initial hallmark of green building, its popularity as a green building benchmark has started to wane.¹⁰³ Instead of mandating LEED certification, some state and local governments are abandoning LEED, restricting LEED use, relying on other standards, or creating their own rating systems.¹⁰⁴ Some of this movement away from LEED is due to LEED's exclusive reliance on sustainable wood certified by the Forrest Stewardship Council (FSC) for certain points and the high percentage of non-domestic sources for wood certified by the FSC.¹⁰⁵ The questions about LEED's reliability and the negative press for USGBC from the Gifford lawsuit have also factored into LEED's declining popularity.¹⁰⁶

For example, North Carolina, Georgia, and Maine have abandoned LEED requirements for state projects, despite no mention of the term "LEED" in their respective bills, amendments, or executive orders.¹⁰⁷

100. Al Driver, *The USGBC Case, The Lanham Act and More*, THE METROPOLITAN CORPORATE COUNSEL, Nov. 2011, at 15, available at <http://metcc.epubxp.com/i/80312>.

101. See Sara Hurtubise, *Report: DC's green-approved buildings using more energy*, THE DAILY CALLER, (Mar. 2, 2014, 11:47 PM), available at <http://dailycaller.com/2014/03/02/report-dcs-green-approved-buildings-using-more-energy/>.

102. See *id.* "Even Washington D.C.'s Department of Environment acknowledged the concerns raised by the dependence on a third-party organization, over which the government has no oversight, to set the Districts green building standards. *Id.*

103. Briana Davis, *LEED Trend Losing Steam*, THE NEWS, (Nov. 30, 2012), <http://www.achrnews.com/articles/121500-leed-trend-losing-steam>.

104. See Lloyd Alter, *State of Maine Bans Use of LEED in State Construction, Design*, (Dec. 21, 2011), <http://www.treehugger.com/green-architecture/state-maine-bans-use-leed-state-construction.html>; see also Emily Badger, *Why are Some States Trying to Ban LEED Green* <http://www.theatlanticcities.com/design/2014/08/why-are-some-states-trying-ban-leed-green-building-standards/6691/>.

105. *Id.*

106. See John Scotfield, *USGBC Continues to "cherry pick" LEED energy data*, THE PRAGMATIC STEWARD (Jan. 7 2014), <http://thepragmaticsteward.com/2014/01/07/usgbc-continues-to-cherry-pick-leed-energy-data/>.

107. Susan Stabley *NC Senate signs off on compromise bill to allow LEED public projects*, CHARLOTTE BUSINESS JOURNAL (June 17, 2013), http://www.bizjournals.com/charlotte/blog/going_green/2013/06/nc-senate-approves-leed-compromise.html. North Carolina's House of Representatives passed a bill to ban LEED, but the North Carolina Senate passed a compromise bill that would allow for LEED or another equivalent to be used for public build-

Other federal agencies and state governments may follow the trend amid pressures from politicians representing states with strong interests in the timber industry.¹⁰⁸ As an alternative to LEED, California and Baltimore City, Maryland have followed the example of cities like Boston and others and created their own green building standards.¹⁰⁹ California's "CALGreen", adopted in 2010, for example, was the first statewide building code to incorporate green building provisions into the code as mandatory requirements for all building projects within its scope.¹¹⁰ How far the pendulum swings away from LEED will be an important green building issue to watch as state governments grapple with budget issues in this era of fiscal austerity.¹¹¹

III. Green Building as a Mandate – Not an Aspiration

Green building in the United States has grown exponentially since its introduction. The USGBC introduced its LEED rating system in 2000, and the Chesapeake Bay Foundation Headquarters in Annapolis, Maryland was the first building in the world to achieve LEED Plati-

ings. However, under the Sustainable Energy-Efficient Buildings Program the governor ultimately signed into law, the certification program must provide incentives for the use of domestic materials. *See* N.C. Gen. Stat. § 143-135.37(f); *see also* Badger, *supra* note 104; *see also* Tom Knox, *Ohio Senate gets anti-LEED resolution*, COLUMBUS BUSINESS JOURNAL, (Feb. 25, 2014, 4:48 PM) <http://www.bizjournals.com/columbus/blog/2014/02/ohio-senate-gets-anti-leed-resolution.html?page=all>. As of February 27, 2014, Ohio's Senate had passed a bill banning LEEDv4 certification for state agencies and government entities. *See* Alter, *supra* note 104.

108. *See* Alyssa Nordhauser, *Senator wants to Ban LEED for HUD & DOT Projects*, BUILDING NEWS NETWORK, (Nov. 29, 2013), <http://www.buildingnewsnetwork.com/senator-wants-to-ban-leed-for-hud-dot-projects/>. United States Senator Roger Wicker from Mississippi introduced Amendment 1777 to the 2014 Transportation, Housing, and Urban Development, and Related Agencies appropriations bill (S.1243) to "ban the use of LEED for Housing and Urban Development (HUD) and Department of Transportation projects. *Id.* *See also* Jolie Lempoine, *Why are States Trying to Ban LEED?*, LOUISIANA CHAPTER, (July 10, 2013), <http://usgbcloisiana.org/news/131603/why-are-some-states-trying-to-ban-LEED.htm>. Florida and South Carolina stopped short of banning LEED altogether on state government projects, and instead prohibit the projects from earning a credit for the use of sustainable wood.
109. *See* North Coast Builders Exchange AIA Redwood Empire REACO present CALGreen, California's Building Standards Commission, (Sept. 19, 2013), <http://www.documents.dgs.ca.gov/bsc/documents/2013/HCD-CBSC-Redwood%20Empire-9-19-13.pdf>; *see also* *Baltimore City Green Building Standard: New Regulations Pose Unanswered Questions*, <http://www.nilesbarton.com/articles/baltimore-city-green-building-standards-new-regualtions-pose-unanswered-que>.
110. *See* North Coast Builders Exchange AIA Redwood Empire REACO present CALGreen, California's Building Standards Commission, (Sept. 19, 2013), <http://www.documents.dgs.ca.gov/bsc/documents/2013/HCD-CBSC-Redwood%20Empire-9-19-13.pdf>;
111. Paul Johnson, *LEED is Going Away?*, WOOD HARBINGER, (Jan. 16, 2014), <http://woodharbinger.com/site/index/php/leed-going-away/>.

num in 2001.¹¹² By 2008, 2,500 buildings were LEED-certified, and by the end of 2012, the total reached 14,000.¹¹³ By the end of 2012, green building represented 44 percent of commercial and institutional construction projects and that figure is expected to increase to fifty-five percent by 2016, for a value of approximately \$250 billion.¹¹⁴ The green building industry has grown into a powerful community, with an estimated 8 million professionals in green building-related industries in 2013.¹¹⁵ Clearly, though, LEED is no longer the exclusive green standard for buildings.¹¹⁶ Green Globes, various cities' and states' own standards, and other codes and standards make it easy for states to encourage and adopt sustainable building practices.

A. *Examples of Federal and State Green Mandates*

i. Federal Mandates

The General Services Administration (GSA), the government's largest civilian landlord, leads the way in green building design, construction, retrofit, and sustainable operations and maintenance.¹¹⁷ Since October 2013, the GSA has required that all new construction and substantial renovations of federally-owned facilities to achieve LEED Gold.¹¹⁸ For major renovations, the GSA now allows for Green Globes as an alternative certification system and has recommended Green Globes to other Federal agencies.¹¹⁹

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112. See Jennie Richards, *GREEN BUILDING: A Retrospective on the History of LEED Certification*, 2-3, SUSTAINABLE INDUSTRIES, <http://enviroinstitute.org/wp-content/uploads/2012/09/GREEN-BUILDING-A-Retrospective-History-of-LEED-Certification-November-2012.pdf>; see also About CBF's "Green" Headquarters, CHESAPEAKE BAY FOUNDATION, <http://www.cbf.org/about-cbf/offices-operations/philip-merrill-environmental-center>.
 113. See generally Thomas Frank, *In U.S. building industry, is it too easy to be green?* USA TODAY, (June 13, 2013 11:53 AM), available at <http://www.usatoday.com/story/news/nation/2012/10/24/green-building-leed-certification/1650517/> (last viewed on Jan. 14, 2013). Globally, nearly 50,000 projects are participating in the LEED program. See Jacob Kriss, *U.S. Green Building Council Certifies 50,000th Green Housing Unit Under LEED for Homes*, USGBC.ORG (Jan. 23, 2014), <http://www.usgbc.org/articles/us-green-building-council-certifies-50000th-green-housing-unit-under-leed-homes>.
 114. *Green Building Outlook Strong for Both Non-Residential & Residential Sectors Despite Soft Economy, Says New Report from Dodge*, MCGRAW HILL CONSTRUCTION, (Nov. 15, 2012), <http://construction.com/about-us/press/green-building-outlook-strong-for-both-non-residential-and-residential.asp>.
 115. *LEED in Motion: People and Progress*, U.S. GREEN BLDG. COUNCIL (Jun. 1, 2013), <http://www.usgbc.org/resources/leed-motion-people-and-progress>.
 116. See Badger, *supra* note 104.
 117. *The Greening of Federal Buildings*, GSA, http://www.gsa.gov/portal/content/123747?utm_source=ocm&utm_medium=print-radio&utm_term=green-building&utm_campaign=Shortcuts (last visited Dec.4, 2013).
 118. *LEED Building Information*, GSA, <http://www.gsa.gov/portal/category/25999> (last visited Feb. 26, 2014).
 119. Stuart Kaplow, *GSA Selects Both Green Globes and LEED for Federal Buildings*, GREEN BLDG. LAW UPDATE BLOG (Oct. 28, 2013), <http://www.greenbuildin->

In 2011, with much controversy, Congress banned the Department of Defense's (DOD) spending on LEED Gold and Platinum certifications, but continued to allow spending for LEED Silver (or its equivalent).¹²⁰ That ban was lifted in December 2013 when President Obama signed into law the National Defense Authorization Act for the 2014 fiscal year.¹²¹ During that same time, the DOD approved the use of Green Globes for its facilities, following the recommendation of the GSA.¹²² This approval is significant for government contractors considering that the DOD manages more than 500 installations worldwide, comprising approximately 300,000 buildings that cover 2.3 billion square feet — six times the footprint of the GSA.¹²³

ii. State Mandates

Although LEED is not the only standard used for green building in the United States, it is the most widely used at this time.¹²⁴ LEED registered projects are highly indicative of the green building trend.¹²⁵ In February 2014, the USGBC released its ranking of the Top 10 States for LEED.¹²⁶ Topping the list are Illinois, Maryland, and Virginia, with a total of 450 certified projects for a total of 58,980,406 square feet of certified space.¹²⁷

glawupdate.com/2013/10/articles/leed-1/gsa-selects-both-green-globes-and-leed-for-federal-buildings/.

120. 125 Stat. 1695 (2011); 125 Stat. 1696 (2011); Katie Weeks, *The Department of Defense's Ban on LEED Spending is Lifted*, ECOBUILDING PULSE (Jan. 3, 2014), http://www.ecobuildingpulse.com/green-building/obama-lifts-the-department-of-defense-ban-on-leed_o.aspx.
121. Katie Weeks, *The Department of Defense's Ban on LEED Spending is Lifted*, ECOBUILDING PULSE (Jan. 3, 2014), http://www.ecobuildingpulse.com/green-building/obama-lifts-the-department-of-defense-ban-on-leed_o.aspx.
122. *Green Globes Wins DoD Endorsement*, ENVTL. LEADER (Dec. 10, 2013), <http://www.environmentalleader.com/2013/12/10/department-of-defense-endorses-green-globes/>.
123. *Id.*
124. Marisa Long, *LEED Green Building Program Remains Preferred Rating System for use in Federal Buildings*, U.S. GREEN BUILDING COUNCIL (Oct. 25, 2013), <http://www.usgbc.org/articles/leed-green-building-program-remains-preferred-rating-system-use-federal-buildings>.
125. Jacob Kriss, *USGBC Releases the Top 10 States in Nation for LEED Green Building*, U.S. GREEN BLDG. COUNCIL (Feb. 18, 2014), <http://www.usgbc.org/articles/usgbc-releases-top-10-states-nation-leed-green-building>.
126. *Id.*
127. *Id.* USGBC calculates the list using per-capita figures, allowing for a fair comparison of the level of green building taking place among states with significant differences in population and, accordingly, number of overall buildings. For instance, California's number of projects (595) is triple the number in Illinois and the square footage certified (72,729,476) is more than double the certified space in Illinois. The District of Columbia would have come in second place by square footage met, but it is not a state so it is not ranked. Of these top 3, Illinois is the only state that does not have P3 enabling legislation applicable to social infrastructure projects.

In Illinois, all new state-funded construction or renovations to existing state-owned buildings are required to seek LEED, Green Globes, or equivalent certification.¹²⁸ Illinois sets a high bar for smaller projects.¹²⁹ Buildings smaller than 10,000 square feet are required to meet LEED Platinum or its equivalent, and allows Green Globes as an alternative.¹³⁰ Larger buildings and renovations are required to meet LEED Silver.¹³¹ Notably, the Illinois Holocaust Museum and Education Center in the Chicago area achieved LEED Gold Certification in 2013.¹³²

Maryland was one of the first states to offer a green building tax credit in 2001, and it is also home to the first certified LEED Platinum building: the headquarters for the Chesapeake Bay Foundation. In 2008, the governor signed the "High Performance Building Act," mandating green construction for Maryland's government-owned buildings.¹³³ As amended in 2010, the Act requires all new public construction and major renovation projects greater than 7,500 square feet, including community colleges that receive public funding, to achieve either the LEED Silver standard, two Green Globes, or some other comparable numeric rating of a nationally-recognized green building standard.¹³⁴ Additionally, Baltimore, Maryland's M&T Bank Stadium, home of the Baltimore Ravens, is the first existing outdoor professional sports facility to achieve LEED Gold certification.¹³⁵

Virginia's requirements go a bit further. By executive order in 2009, Virginia's governor required all Virginia agencies and institutions constructing state-owned facilities over 5,000 gross square feet in size and renovations of such buildings valued at fifty percent of the assessed building value, to be designed and constructed to meet the International Energy Conservation Code (IECC)¹³⁶ and be consistent

128. Green Buildings Act, 20 ILL. COMP. STAT. § 3130/15 (2009).

129. *Id.*

130. *Id.*

131. *Id.*

132. *Illinois Holocaust Museum Awarded Prestigious LEED Gold Certification*, PRWEB, Mar. 26, 2013, <http://www.prweb.com/releases/2013/3/prweb10567729.htm>

133. *See* MD. CODE ANN., STATE FIN. & PROC. § 3-602.1 (2010). Washington State was the first state to mandate that all new buildings larger than 5,000 square feet meet or exceed LEED Silver, and renovation projects where the cost is greater than 50% of the assessed value and the project is larger than 5,000 gross square feet of occupied or conditioned space. Washington also created its own standard for school construction, the Washington Sustainable School Design Protocol. WASH. REV. CODE §§ 39.35D.040 (2011).

134. MD. CODE ANN., STATE FIN. & PROC. § 3-602.1 (2010).

135. Ryan Sharrow, *M&T Bank Stadium earns LEED Gold rating*, BALT. BUS. J. BLOG, Nov. 19, 2013 <http://www.bizjournals.com/baltimore/news/2013/11/18/mt-bank-stadium-earns-leed-gold-rating.html>

136. International Code Council promulgates and publishes the IECC. *International Code Council*, ICC, <http://www.iccsafe.org/iccforums/Pages/default.aspx?action=ViewTopics&fid=32>.

with energy performance standards at least as energy efficient as LEED Silver or Green Globes 2 Globes Standards.¹³⁷ Virginia also requires its agencies to purchase or lease Energy Star-rated appliances and equipment.¹³⁸ In addition, the Executive Order instructs the Commonwealth to encourage the private sector to adopt energy-efficient building standards by giving preference when leasing facilities for state use to facilities meeting LEED Silver or Green Globes Two Globes standards.¹³⁹ Arlington, Virginia now boasts its first LEED Platinum commercial building.¹⁴⁰

IV. Mature Issues In Green Building

The development of green building legal issues and the proliferation of green building legislation since 2005 has led to a maturing of green building law as it relates to design professionals and contractors.¹⁴¹ Looking ahead, it is important to consider where green and sustainable design and construction has come from and where it is now. To that end, the following risks - though well-understood in the industry at this point in time - are still critical for design professionals, contractors, and their counsel to address when assessing pursuits that may involve a green building component.

The common threads running through each of the issues for design professionals and contractors include avoiding unintended guarantees (such as explicitly promising third-party certification or post-completion performance metrics), being aware of applicable laws, and staying current on the certification processes, and new technologies that may be specified in support of a given project's green building goals and mandates.

A. *Issues for Design Professionals*

i. Client education and maintenance

Arriving at the "meeting of the minds" is paramount for a designer when discussing green building objectives with its client. The 2007 version of the AIA's standard suite of design and construction documents places an affirmative obligation on the architect to discuss, for example, "sustainable" alternatives with its client.¹⁴² Those docu-

137. VA. Exec. Order No. 82 "Greening of State Government" (2009).

138. *Id.*

139. *Id.*

140. *Development Spotlight: 1776 Wilson Boulevard Grand Opening Economic Update*, ARLINGTON ECON. DEV., (Nov. 2012), <http://www.arlingtonvirginiausa.com/economic-update/2012/november/development-spotlight-1776-wilson-boulevard-grand-opening/>

141. *See supra* Part II.A.

142. *AIA Document B101 – 2007 SP*, THE AM. INST. OF ARCHITECTS, <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aia093948.pdf> (last visited Apr. 19, 2014).

ments, however, do not define the scope of what such alternatives will precisely entail.¹⁴³ The AIA's "sustainable projects" series of documents builds significant green building obligations into the architect's basic services objections in the B101 Owner/Architect agreement.¹⁴⁴ Reviewing these requirements carefully is critical. Litigation has surfaced surrounding contract documents that do not accurately identify and define the parties' green building objectives.¹⁴⁵ While the importance of addressing those objectives is certainly a mature issue that is well-understood as a risk on any type of project, it will remain essential for pursuits moving forward no matter the scope of work or projected level of certification, particularly as new industry form documents become more widely adopted.

ii. Evolving regulatory structures

As regulatory schemes applying to both public and private sector projects have increased at the state and local levels,¹⁴⁶ design professionals have confronted two important issues relating to green building projects. First, language in services contracts that requires designers to comply with "all applicable rules and regulations" will likely apply to their designs. Thanks to the patchwork of green building codes, ordinances, and other regulations that exist across the country, understanding which pieces of legislation may apply and how they apply continues to be a challenge. Second, because green building requirements have been written into legislation, both public and private owners are forced to demand compliance with that legislation in their contracts. This result has implications for professional liability, insurance, and the standard of care against which the designer's performance will be judged, as discussed below.

iii. Elevated standards of care and heightened warranty language in services contracts

An owner demanding absolute compliance with a green building regulatory regime may unwittingly jeopardize its designer's insurance coverage. Professional liability insurance provides coverage for claims that the designer failed to satisfy its standard of care in rendering its professional design services.¹⁴⁷ That standard of care is not absolute perfection, and by agreeing to liability beyond the standard, the pro-

143. *Id.*

144. *Id.*

145. See Cases cited *supra* Part II.B.

146. Stephanie Vierra, *Green Building Standards and Certification Systems*, WHOLE BLDG. DESIGN GUIDE, <http://www.wbdg.org/resources/gbs.php> (last updated Sept. 26, 2011).

147. *Intro to Professional Liability Insurance*, VICTOR O. SCHINNERER & COMPANY, INC., <http://www.schinnerer.com/risk-mgmt/Documents/UnprotectedFiles/Intro-professional-liability.pdf> (last visited Apr. 20, 2014).

fessional liability policy may disclaim coverage in the event of a claim arising out of the designer's services.¹⁴⁸

Yet many public sector clients will not negotiate their standard terms and conditions, which are frequently written for the acquisition of both goods and services. Language in a purchase order for goods will typically require those goods to be "free from all defects," which is highly problematic for a design professional because a "free from defects" standard is an elevated standard of care and is most likely not insurable.¹⁴⁹ And with state and local green building programs dramatically increasing in number over the last decade, many public owners have been left with no choice but to demand absolute compliance with applicable certification mandates. Designers' professional liability insurers can be an important resource in this context, advising whether such language is indeed not insurable.¹⁵⁰ Regardless, designers must carefully balance the risks presented in this environment by non-negotiable contract language.

iv. Specifying new or emerging technologies

Perhaps the most fluid of the mature green building risks identified in this paper is technology. New types of systems, materials, and software are constantly emerging that are often not fully tested or vetted before coming to market. To that end, most design professionals must understand that a major scope-driven area of risk on green building projects is understanding and explaining the types of systems that can, or cannot, deliver the type of green building objectives that an owner is seeking. This understanding of the limitations and performance of different types of systems and ability to communicate with such clients is particularly important because several claims against designers have arisen out of confusion over the performance of such systems in light of certain green building objectives.¹⁵¹

v. Professional liability insurance coverage for third-party certification efforts

At the outset of the expansion in third-party green building certification efforts, it was not clear how and whether a design professional's efforts in securing such certification would impact its professional lia-

148. *Professional Liability Update- What is the Standard of Care?*, CAVIGNAC & ASSOC. (Sept. 2003), <http://www.cavignac.com/publications/professional-liability-update-what-is-the-standard-of-care/>

149. *AIA Document A201 – 1997*, THE AM. INST. OF ARCHITECTS, <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aia079726.pdf> (last visited Apr. 19, 2014); *Intro to Professional Liability Insurance*, *supra* note 147.

150. See generally Judy Greenwald, *Professional liability risks grow with green construction*, Business Insurance (July 24, 2011), <http://www.businessinsurance.com/article/20110724/NEWS07/307249996?tags=%7C308%7C314>

151. See Musica presentation, *supra* note 43.

bility insurance by, among other things, functioning as the equivalent of a warranty or a guaranty which would void insurance coverage under the standard professional liability policy exclusions. As part of current standard practice, most professional liability insurers will provide coverage to design professionals for any claims arising out of their negligent performance of third-party certification efforts.¹⁵²

To date, however, there has only been one reported lawsuit whereby an owner submitted a claim against a designer alleging that the designer failed to pursue or achieve LEED certification as required by the contract.¹⁵³ In that case, *Bain v. Vertex Architects*, the owner of a historic, three-story, 2,200-square-foot house in the Chicago suburbs alleged that its architect, among other breaches of the parties' AIA-B105 architect's agreement, had "failed to pursue and obtain for the Project certification from the USGBC LEED for Homes Program."¹⁵⁴ Although the case still appears to be mired in discovery, it should serve as a reminder that a designer's third-party certification efforts can present risks that must be managed by contract.¹⁵⁵

B. Issues for Contractors

i. Compliance with Applicable (Evolving) Laws and Regulations

The green building phenomena, bordering on frenzy in the mid to late 2000s, may have accelerated a misguided early adoption of the LEED standard into federal, state, and local legislation.¹⁵⁶ Nevertheless, at this point virtually all state and local governments have some sort of green legislation.¹⁵⁷ Generally, two types of state legislation exist: mandates and incentives.¹⁵⁸ For those jurisdictions that mandate green construction, contractors' risks increase.¹⁵⁹ Form contract provisions require the contractor to "comply with laws, statutes, ordi-

152. See Helena O'Connor, *Architect's Professional Liability Risks in the Realm of Green Building*, 4 PERKINS AND WILL RESEARCH JOURNAL 23 (2012).

153. See Stephen Del Percio, *Bain v. Vertex Architects: Firm "failed to Diligently Pursue and Obtain LEED for Homes Certification from USGBC"*, GREEN REAL EST. LAW J., Mar. 18, 2011, available at <http://www.greenrealestatelaw.com/2011/03/bain-v-vertex-architects-firm-failed-to-diligently-pursue-and-obtain-leed-for-homes-certification-from-usgbc/>.

154. *Id.*

155. *Id.*

156. Booz Allen Hamilton, *Green Jobs Study*, U.S. Green Building Council at 3, available at <http://www.usgbc.org/Docs/Archive/General/Docs6435.pdf>

157. See generally Anthony DeLaPaz, *LEED Locally: How Local Governments Can Effectively Mandate Green Building Standards*, 2013 U. ILL. L. REV. 1211 (2013).

158. See Mark Gielecki, Fred Mayes, and Lawrence Prete, *Incentives, Mandates, and Government Programs for Promoting Renewable Energy*, U.S. Energy Information Association (last modified Sept. 30, 2003), available at http://lobby.la.psu.edu/_107th/128_PURPA/Agency_Activities/EIA/Incentive_Mandates_and_Government.htm.

159. See Zurich, *Green Building: What are the Risks?* (2011), available at <http://www.zurichna.com/internet/zna/SiteCollectionDocuments/en/Knowledge%20Center/Whitepapers/Real%20Estate/Green-building-risks.pdf>.

nances, codes, rules and regulations, applicable to the performance of the work.”¹⁶⁰ This language incorporates into the contract the standards mandated in that jurisdiction for public entities and agencies.¹⁶¹ Thus, the contractor arguably becomes obligated to achieve the statutorily-required level of certification. Failure to do so may be deemed a breach of contract. At a minimum, the compliance language suggests that the contractor is required to achieve the performance level (and points) applicable to its work. Contractors must be mindful not only of broad-brush legislation (i.e., LEED-Silver or its equivalent required) but also of industry-specific laws, such as those applicable to storm water management or HVAC components. With this in mind, contractors should carefully review, revise and negotiate their contracts to include disclaimer language to avoid unintended guarantees of achieving certification or other green standard.

ii. Heightened Scrutiny of Advertising Sustainable Services

In 1992, the Federal Trade Commission (FTC) issued its “Green Guides,” to aid companies (and their marketers) in marketing their products or services as environmentally friendly.¹⁶² In October, 2012, the FTC issued its final revised version of the Green Guides.¹⁶³ The Green Guides advise marketers to avoid overstating environmental attributes of their services and products and to avoid misrepresenting - directly or by implication - that a service offers a general environmental benefit.¹⁶⁴ Although the Guides are not agency rules or regulations, the FTC has exclusive authority to file enforcement actions against companies and persons who overstate the “greenness” of their services.¹⁶⁵ In 2013, the FTC brought at least 12 enforcement actions against product manufacturers.¹⁶⁶ Some states, such as Florida, California, and Minnesota, have incorporated the Green Guides into state law.¹⁶⁷ Thus, contractors should take care when promoting their “sustainable” expertise when providing limited design services or provid-

160. See, e.g., AIA 201-2007 General Conditions of the Contract at §3.7.

161. See *id.*

162. Fed'l Trade Comm'n, *Guides for the Use of Environmental of Environmental Marketing Claims*, 16 C.F.R. Part 260, n.1 (2012).

163. *Id.*

164. See *id.* at § 260.3(c).

165. See *id.*

166. See Claim Goodwin Procter Alert, *FTC Enforcement Initiatives Spotlight Risks in Making Green Marketing*, (November 12, 2013), available at http://www.goodwinprocter.com/Publications/Newsletters/Client-Alert/2013/1112_FTC-Enforcement-Initiatives-Spotlight-Flaws-in-Green-Marketing-Claims.aspx?article=1.

167. See *id.*

ing a new product on green projects.¹⁶⁸ The FTC has stated publicly its intention to enforce the Guides against private sector actors.¹⁶⁹

iii. Working with Emerging Technologies, Products and Materials

Architects often specify green products, materials or systems critical to the achievement of a certain green standard. In some situations, however, these products may be new to the market, untested for the specific application or lack a performance record.¹⁷⁰ Such circumstances raise three issues: 1) the performance of the product as advertised; 2) the availability of the product; and 3) the availability of product substitutes or its "equivalent."¹⁷¹ As a result of one or more of these issues, the possibility of product failure or its incompatibility with other systems or components substantially increases.¹⁷²

This scenario played out in *The Chesapeake Bay Foundation v. Weyerhaeuser*,¹⁷³ which involved the failure of certain green materials used on the project.¹⁷⁴ In that case, the owner sought and received LEED Platinum.¹⁷⁵ To achieve that goal, the architect specified a number of innovative design elements, materials, and techniques.¹⁷⁶ Located on the shores of the Chesapeake Bay, the building was designed with a roof truss system with various exterior columns and beams which were exposed to coastal weather and other challenging conditions.¹⁷⁷ As part of the design, several of the exterior beams penetrated the building.¹⁷⁸ Parallam, a structural material made of wood waste materials, was ultimately used extensively for the structure's outer shell and the

168. *See id.*

169. J. Kohm, Associate Director, Division of Enforcement, "Green Marketing: Communicating Environmental Benefits to Effect Change and Sell Product," Presentation at ABA Consumer Protection Conference (June 20, 2009).

170. *Id.*

171. JOSEPH C. KOVALL & MICHAEL A. SCHOLLAERT, MARYLAND CONSTRUCTION LAW DESKBOOK pt. 2c, 3b (1st Ed. 2012).

172. *Id.*

173. *The Chesapeake Bay Found. v. Weyerhaeuser*, 848 F. Supp. 2d 570 (D. Md. 2012) *vacated and remanded*, 2014 WL 3747128 (2014); *see also* Chris Cheatem, *First LEED Platinum Building "At Risk of Collapse"?*, GREEN BUILDING LAW UPDATE, (Mar. 21, 2011), at <http://www.greenbuildinglawupdate.com/2011/03/articles/legal-developments/first-leed-platinum-building-at-risk-of-collapse>.

174. *Chesapeake Bay Found.*, 848 F. Supp. 2d at 574-76; *see also*, Cheatem, *supra* note 173.

175. Jeanne Schubert Barnum and Levi Jones, *Green Building: Limitations Clock Starts at First Sign of Trouble*, Section of Litigation, Construction Litigation Committee, Summer 2012, *available at* <http://apps.americanbar.org/litigation/committees/construction/email/summer2012/summer2012-0912-green-building-limitations-clock.html> (discussing of the allegations on the resolution of the case on limitations grounds).

176. *Id.*

177. Cheatem, *supra* note 173.

178. *Id.*

exposed beams that extended beyond the roof of the building.¹⁷⁹ Parallam is considered “green” because it is made from wood scraps and because it uses timber from fast-growth trees, helping to relieve pressure on old-growth forests.¹⁸⁰

Weyerhaeuser, a forest products supply company, contracted to supply the exposed Parallam treated with PolyClear 2000 (a wood preservative).¹⁸¹ The specifications required, among other things, that the preservative not contain chromium or arsenic.¹⁸² According to the manufacturer’s specification, PolyClear 2000 was an appropriate product for the exposed beams.¹⁸³ Construction was completed in December 2000.¹⁸⁴ Shortly after completion, the building suffered from water intrusion, which was ultimately remediated by the end of 2003.¹⁸⁵ An investigation discovered that water was traveling through the Parallam into the building.¹⁸⁶

In 2009, the owner discovered that the Parallams showed signs of rotting and, along with the architect and contractor, instituted a lawsuit against the supplier, Weyerhaeuser, in December 2010.¹⁸⁷ Plaintiffs claimed that either the Parallams were not treated with the PolyClear 2000 as required by the specifications, or, that the PolyClear 2000 was not the proper treatment for the exposed Parallams.¹⁸⁸ Although the plaintiffs asserted various tort, contract, and indemnity claims, the case was ultimately decided in favor of Weyerhaeuser on limitations grounds.¹⁸⁹ The case highlights the need for contractors to familiarize themselves and their subcontractors with the new systems and products and with the availability of substitutions for the specified systems and products.¹⁹⁰

179. See Barnum and Jones, *supra* note 175.

180. *Id.*

181. *Id.*

182. *Id.*

183. *Id.*

184. *Id.*

185. *Chesapeake Bay Found.*, 848 F. Supp. 2d at 574-76.

186. *Id.* at 575.

187. *Id.* at 576.

188. *Id.*

189. *Id.* at 577; The statute of limitations in Maryland for breach of contract and negligence is three years. *Id.* Weyerhaeuser was able to convince the court to grant it summary judgment because the plaintiffs were aware that the water infiltration early on would lead to premature deterioration of the exposed wood beams. *Id.* The summary judgment was appealed to the 4th circuit, which held that there was a dispute of material fact and remanded the case to the trial court for a trial on the merits. A trial date is scheduled for July, 2015. *Chesapeake Bay Found. v. Weyerhaeuser Co.*, No. 12-1515, 2014 WL 3747128, at *4 (4th Cir. 2014).

190. *Id.* at 576-77.

iv. Performance Specifications versus Design Specifications.

Contractors are required to construct a project according to the plans and specifications provided by the owner.¹⁹¹ According to the *Spearin* doctrine,¹⁹² the owner therefore impliedly warrants that if the contractor performs the work in accordance with the plans and specifications, “the contractor will not be responsible for the consequences of defects in the plans and specifications.”¹⁹³ The *Spearin* doctrine is applicable to all projects, both public and private.¹⁹⁴ The rule, however, applies only to design specifications, which set forth in detail clear instructions on materials to provide and how to perform the work (*e.g.*, “install a 20,000 BTU air conditioner manufactured by Carrier”).¹⁹⁵ The rule does not apply to performance specifications.¹⁹⁶ Performance specifications detail the objective to be obtained, leaving to the contractor (and its subcontractors) the responsibility of determining how to achieve the results (*e.g.*, “install an air conditioning system capable of maintaining an indoor temperature of 72° F.”).¹⁹⁷ Consequently, liability for the failure of this system shifts to the contractor.¹⁹⁸ Exposure increases for complying with these specifications when they are directly tied to specific LEED performance credits.¹⁹⁹

V. Looking Ahead – Green Building and Public Private Partnerships (P3s)

The intersection between green building laws and P3 projects cannot be ignored. Reliance by governments and agencies on the P3 model because of budgetary constraints and lack of resources to upgrade the country’s aging infrastructure and to make better use of existing assets is on the rise.²⁰⁰ Because the P3 model has until recently not been used extensively in the United States, domestic potential project participants will be faced with experienced international

191. See Maura K. Anderson, James K. Bidgood, Eugene J. Heady, *Hidden Legal Risks of Green Buildings*, 84 FLA. B.J. 35, 38 (2010).

192. *United States v. Spearin*, 248 U.S. 132 (1918).

193. *Id.* at 61.

194. Brendan P. Mitchell, *The Applicability of the Spearin Doctrine: Do Owners Warrant Plans and Specifications?*, FINDLAW (March 3, 2008), <http://corporate.findlaw.com/law-library/the-applicability-of-the-spearin-doctrine-do-owners-warrant.html>.

195. Admin, *Difference Between a Design and Performance Specification and the Spearin Doctrine*, FLORIDA CONSTRUCTION LEGAL UPDATES, (Nov. 3, 2013), <http://www.floridaconstructionlegalupdates.com/difference-between-a-design-and-performance-specification-and-the-spearin-doctrine/>.

196. *Id.*

197. *Id.*

198. See *id.*

199. See Maura K. Anderson, James K. Bidgood, Eugene J. Heady, *Hidden Legal Risks of Green Buildings*, 84 FLA. B.J. 35, 38 (2010).

200. See generally *infra* Part V.A.

competition for large, long-term projects.²⁰¹ Sophisticated planning and strategic alliances will be required for design professionals and contractors wishing to enter the burgeoning P3 market.²⁰²

A. *What is a Public Private Partnership?*

The National Council of Public-Private Partnerships defines a P3 as a “contractual agreement between a public agency (federal, state, or local) and a private sector entity.”²⁰³ Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public.²⁰⁴ In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.²⁰⁵ More generally, public-private partnerships refer to project delivery mechanisms where a private sector entity (or group of entities through a joint venture arrangement generally referred to as a P3 consortium or concessionaire) create a special purpose entity (SPE) that contracts with a public agency to design, build, finance, operate, and/or maintain transportation (*horizontal*) projects, and, increasingly, social infrastructure (*vertical*) projects including schools, universities, hospitals, courts and other works with public purposes.²⁰⁶

P3s are typically very complex, large-scale projects, involving many stakeholders - the government, the consortium and the public - and typical agreements range from 20 to 50 years.²⁰⁷ In these types of arrangements, the SPE absorbs most of the upfront costs, and then benefits from revenues generated by the project (toll lanes or tenant

201. See generally *infra* Part VI.

202. See generally *infra* Part VII.

203. See *Public-Private Partnerships Defined, 7 Keys to Success*, THE NATIONAL COUNCIL OF PUBLIC-PRIVATE PARTNERSHIPS, <http://www.ncppp.org/ppp-basics/7-keys/> (last visited Aug. 7, 2014).

204. *Id.*

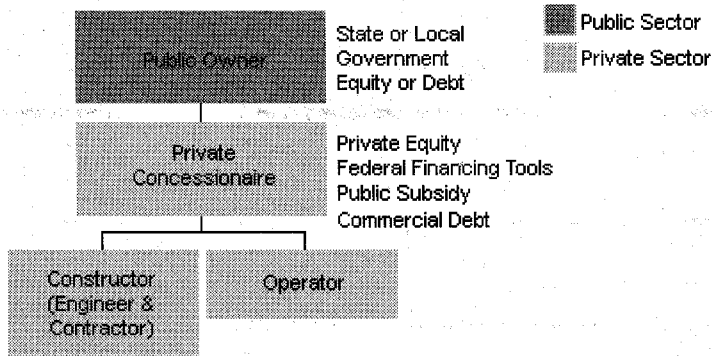
205. *Id.*

206. See generally *Types of Partnerships*, THE NATIONAL COUNCIL OF PUBLIC-PRIVATE PARTNERSHIPS, <http://www.ncppp.org/ppp-basics/types-of-partnerships> (includes a detailed e-listing of the types of partnerships).

207. *Id.* One example is the Goethals Bridge Replacement Project, a design-build project for the Port Authority of New York & New Jersey, replace the existing Goethals Bridge which spans the Arthur Kill River on I-278 connecting Elizabeth, New Jersey and Staten Island, New York. Despite the absence of New York legislation that enables P3, the Goethals Bridge Replacement Project was awarded in April 2013, to the NYNJ Link Partnership, for \$1.5 billion under a 40-year Design, Build, Finance, and Manage contract with the Port Authority and three lead contractors. This P3 is the first true surface transportation P3 in the Northeast Region. The planning for this project began ten years ago, and the Goethals Bridge is expected to be in partial service in late 2016 and fully functional in late 2017. For more information see Bridges and Tunnels, PORT AUTHORITY OF NEW YORK, <http://www.panynj.gov/goethalsbridge/>.

leases), or, receives payment from the public entity over time.²⁰⁸ Because of the complexity of the arrangement, design-build or a modified integrated project delivery system is most commonly used to construct P3 projects.²⁰⁹

Every P3 arrangement is unique. The Federal Highway Administration illustrates the concessionaire model as follows:²¹⁰



This diagram is greatly simplified, as it does not show the complex contractual arrangement that results in a P3 agreement:²¹¹

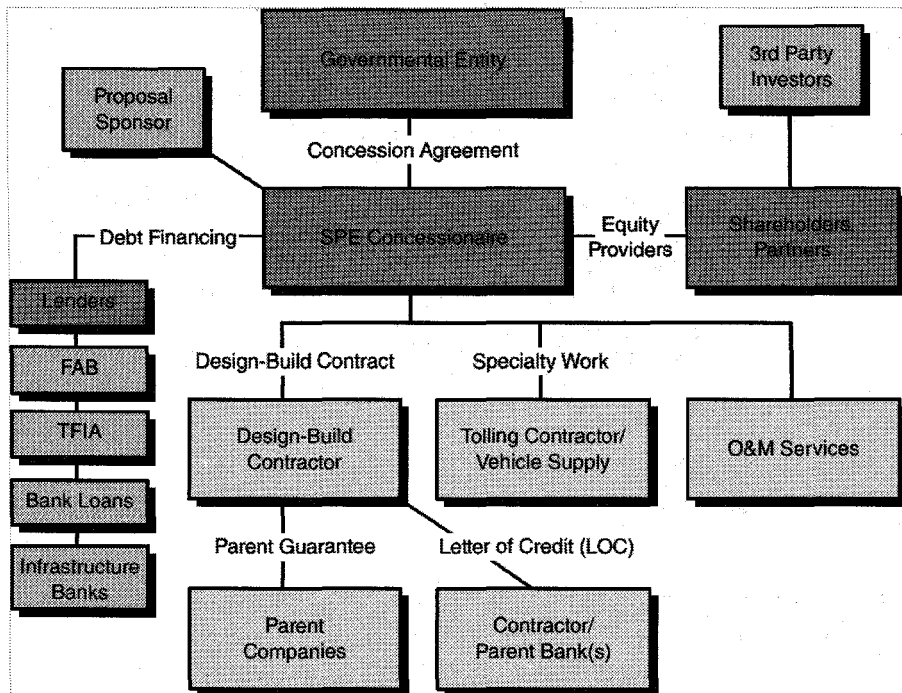
208. See generally National Council of Public-Private Partnerships, *supra* note 206, at 31.

209. Dept. of Transp., *Types of Public-Private Partnerships (P3s)*, FEDERAL HIGHWAY ADMINISTRATION, http://www.fhwa.dot.gov/ipd/pdfs/fact_sheets/p3_options.pdf.

210. Dept. of Transp., *P3 Defined*, FEDERAL HIGHWAY ADMINISTRATION OFFICE OF INNOVATIVE PROGRAM DELIVERY, http://www.fhwa.dot.gov/ipd/p3/defined/design_build_finance_operate.htm.

211. See LEWIS BAKER & ANDREW FRAISER, NUTS AND BOLTS OF A PUBLIC PRIVATE PARTNERSHIP, 30 (2013).

Typical PPP Contractual Structure



Depending on the P3 structure, however, the consortium or SPE may bear special risks because it generally assumes most - if not all - of the project's financial, technical, and operational risk in exchange for the rights to the underlying revenue stream generated by the project - for example, tolls from a highway, fares from a light rail system, or lease payments from a tenant.²¹² The consortium will solicit funding from a broad range of sources - debt financing from banks or capital markets, equity financing from its own members, or bond financing or grant blocks from the project's public sponsor - that will be secured by the project's underlying revenue stream.²¹³ The funding partners will typically exercise significant control over the terms of the financing and the underlying contract documents.²¹⁴ And, the developer/consortium takes on other risks that are usually born by the project owner, such as cost-overruns, delays caused by the owner, and maintenance issues.²¹⁵

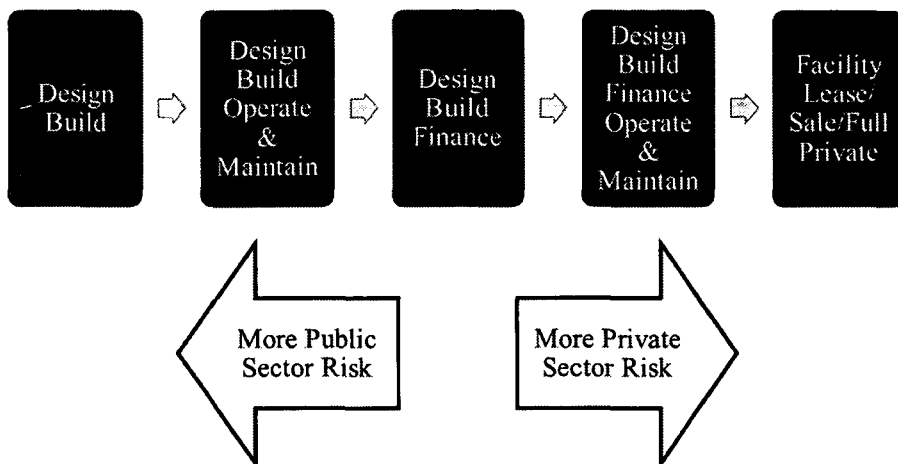
212. See generally National Council of Public-Private Partnerships, *supra* note 206, at 31.

213. Dept. of Transp., *P3 Defined*, *supra* note 210.

214. *Id.*

215. *Id.*

The level of risk transferred to the SPE concessionaire depends upon the type of P3 and level of control the concessionaire will have over the asset:²¹⁶



Governments see many advantages of P3 projects relative to traditional project delivery methods, such as: more rapid development, improved efficiency in all phases of the project from concept to maintenance, more technical and delivery innovation, increased return on investment, and access to private capital, to name a few.²¹⁷

B. P3 History in the United States.

The P3 method, although entrenched in Europe, Canada, and Asia, is just recently beginning to take hold in the United States.²¹⁸ The factor cited by the Federal Highway Administration prohibiting more widespread acceptance of the model is an institution's culture and context – including restrictive laws, archaic regulations, traditional financing strategies, inflexible management style, organizational stovepipes, stakeholder resistance, bureaucratic procedures, and lack of competition.²¹⁹

This notwithstanding, use of P3s in this country dates to the 1750s.²²⁰ In 1752, Benjamin Franklin and Dr. Thomas Bond raised

216. Anatoly M. Darov, *Public Private Partnerships*, webinar presentation to LFA Real Estate Community (Feb. 26, 2014).

217. Dept. of Transp., *FAQs*, FEDERAL HIGHWAY ADMINISTRATION OFFICE OF INNOVATIVE PROGRAM DELIVERY, <http://www.fhwa.dot.gov/ipd/p3/faqs/#11>.

218. Aecom Consult Team, *User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States*, U.S. DEPT. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION (July 7, 2007) http://www.fhwa.dot.gov/ipd/pdfs/ppp_user_guidebook_final_7-7-07.pdf

219. *Id.*

220. THEODORE THAYER, *TOWN INTO CITY 1746-1765 IN PHILADELPHIA: A 300 YEAR HISTORY* 68, 81-82 (Russell F. Weigley ed. 1982).

private funds that were then matched by the Pennsylvania Assembly to establish the Pennsylvania Hospital (now part of the University of Pennsylvania Hospital System), which opened its doors to Philadelphians as a charity hospital.²²¹ Then, beginning in the 1790s, the private sector participated in the development of the Philadelphia and Lancaster Turnpike in Pennsylvania.²²² The Golden Gate Bridge was also built with private funds.²²³ However, soon after the Great Depression, the New Deal and the end of World War II in the 1940s, private participation in infrastructure development diminished.²²⁴

In the late 1980s, states began to explore anew the potential of private sector involvement in highway development.²²⁵ In 1988, Virginia passed legislation authorizing the development of the Dulles Greenway under one of the first formal P3 agreements in the United States.²²⁶ The project was the precursor to the Virginia Public-Private Transportation Act of 1995, which was also one of the first P3-enabling statutes in the United States.²²⁷

In 1989, ground was broken on the first modern-day P3 in the United States.²²⁸ The project, a 47-mile highway outside Denver, Colorado, called E-470, was built by eight counties and cities to accommodate future traffic to the soon to be opened Denver International Airport.²²⁹ Void of federal or state funding, E-470 was built with private funds.²³⁰ Opening in 1991, four years ahead of the new airport, the toll road paved the way for economic development.²³¹ In the wake of E-470, toll roads became the standard P3 product in the grow-

221. *Id.*

222. See U.S. Department of Transportation, Report to Congress on Public Private Partnerships 15 (Dec. 2004), available at <http://www.fhwa.dot.gov/reports/pppdec2004/pppdec2004.pdf> (discussing the full discussion of P3 history in the United States).

223. Dan McNichol, *The United States: The World's Largest Emerging P3 Market 3* (April 2013), available at <http://www.danmcnichol.com/wp-content/uploads/2014/03/FINAL-P3-AIG-Whitepaper.pdf>; see also Golden Gate Bridge Highway & Transportation District, *Bond Measure Passes – Against the Odds?*, <http://goldengatebridge.org/research/BondMeasure.php>.

224. *Id.*

225. Dept. of Transp., *P3 Defined*, *supra* note 210.

226. *Id.*

227. See *id.* (also highlighting information on other private and government partnerships on transportation projects including the 91 Express Lanes Project in California, the Southern Connector in South Carolina, and the E-470 in Colorado).

228. See Cathy Proctor, *Final Leg of E-470 Nears Completion*, DENVER BUSINESS JOURNAL, (Dec. 12, 2002), available at <http://www.bizjournals.com/denver/stories/2002/12/16/story1.html>.

229. Dan McNichol, *The United States: The World's Largest Emerging P3 Market*, DANMCNICHOL.COM, danmcnichol.com/wp-content/. . . /FINAL-P3-AIG-Whitepaper.pdf (last updated Apr. 2013).

230. *Id.*

231. *Id.*

ing U.S. market.²³² A quarter of a century later, the scope of P3s in the United States has finally broadened beyond the toll plaza.²³³

C. *P3s Now*

The United States may be considered the world's largest emerging P3 market.²³⁴ With state and local governments facing budgetary restrictions, the P3 project delivery system is finally trending in the United States.²³⁵

i. State

Thirty-four states, along with the District of Columbia and Puerto Rico, have enacted P3 enabling legislation.²³⁶ Of those, 23 states also allow P3s for social infrastructure construction.²³⁷ Of those 23 states, 21 have laws mandating sustainable construction practices for publicly-owned or -funded projects.²³⁸ Further, a few states also have created departments to evaluate, procure, negotiate and/ or manage P3s.²³⁹ Virginia, Florida, Texas and Ohio are leading the nation in the acceptance of P3s for social infrastructure, with Maryland close behind.²⁴⁰

a. *Maryland's P3 Legislation*

Legislation encouraging the use of public-private partnerships (P3s) to address Maryland's infrastructure needs passed the Maryland

232. *Id.*

233. *Id.* (also highlighting recent examples of P3 toll way projects, including the Chicago Skyway in 2005, the Indiana Toll Road in 2006, the Pocahontas Parkway in 2006, and the Northwest Parkway in 2007).

234. *Id.*

235. Emilia Istrate & Robert Puentes, *Moving Forward on Public Private Partnerships: U.S. and International Experience with PPP Units*, BROOKINGS INSTITUTE (Dec. 2011), <http://www.brookings.edu/research/papers/2011/12/~media/BC5358BD93B34E76ACD885F9BD60B35C.ashx>.

236. *See P3 Enabling Statutes*, PILLSBURYLAW.COM, <http://www.pillsburylaw.com/sitefiles/mdt/p3enablingstatutes.pdf> (last visited Apr. 23, 2014); *see also* Lewis Baker & Andrew Fraiser, *Nuts and Bolts of a Public Private Partnership*, Address Before the 2013 ABA Forum on the Construction Industry (September 26, 2013).

237. *See PPP State by State Map Vertical and Horizontal Projects available at* http://www.agc.org/cs/advocacy/legislative_activity/public_private_partnership/state_by_state (as of October 15, 2012).

238. *See id.*

239. Dept. of Transp., *Establishing A Public-Private Partnership Program: A Primer*, FEDERAL HIGHWAY ADMINISTRATION, (Nov. 2012), https://www.fhwa.dot.gov/ipd/pdfs/p3/p3_establishing_a_p3_program_112312.pdf.

240. *See Closing America's Infrastructure Gap: The Role of Public-Private Partnerships*, Deloitte, [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_ps_PPPUS_final\(1\).pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_ps_PPPUS_final(1).pdf) (last updated Mar. 31, 2011).

General Assembly in April 2013, and took effect on July 1, 2013.²⁴¹ The law provides Maryland's first statewide policy on P3s, formalizes the process for evaluating both solicited and unsolicited proposals, and clarifies the requirements for any P3 agreement.²⁴² The law extends the P3 arrangement beyond transportation projects for the first time and includes any capital facility or structure.²⁴³ The law allows P3 projects to be financed with any combination of federal, State, or local funds, loan debt, or other public funding sources, as well as private funding or financing sources.²⁴⁴

Maryland's P3 law applies to a sale or lease agreement between the State and a private entity that involves either: (i) the private entity assuming control of the operation or maintenance of a State asset, or (ii) the private entity constructing, financing, or operating a State asset or facility for the State's use and collecting fees in connection with the use of the asset.²⁴⁵

The P3 law provides for a number of detailed requirements for P3 agreements, including provisions related to the terms of transferring interests in the P3 agreement, establishment of rates or fees related to the public asset, the terms of any revenue-sharing agreements, minimum quality standards, operation and maintenance standards, the State's inspection rights, compensation events for both parties, provisions for oversight, hand-back requirements, and performance security.²⁴⁶ The law also provides detailed guidance on how the state's agencies, legislative offices and committees, the state comptroller, the state treasurer, and Board of Public Works must initially propose and evaluate P3 projects and procedures.²⁴⁷

b. Virginia's P3 Legislation

Virginia has two acts applicable to P3 projects.²⁴⁸ In addition to its Public-Private Transportation Act of 1995, which applies to transportation facilities, it also enacted the Public Private Education Facilities and Infrastructure Act of 2002.²⁴⁹ The PPEA applies to almost any state or local public or government facility, including schools, fire sta-

241. MD. CODE ANN., STATE FIN. & PROC. §§ 10A-101 *et seq.* (West 2012 & Supp. 2013).

242. *See id.*

243. MD. CODE ANN., STATE FIN. & PROC. § 10A-101.

244. MD. CODE ANN., STATE FIN. & PROC. § 10A-103; *see also* Brian Walsh, David L. Winstead, and Steve T. Park, *Maryland Passes P3 Legislation*, BALLARD SPAHR, LLP, (April 9, 2013), <http://www.ballardspahr.com/alertspublications/legalalerts/2013-04-09-maryland-passes-p3-legislation.aspx>.

245. MD. CODE ANN., STATE FIN. & PROC. § 10A-101.

246. *Id.* at § 10A-401.

247. *Id.* at § 10A-203.

248. VA. CODE ANN. §§ 56-556-575 (1995); VA. CODE ANN. §§ 56-575.1 *et seq.*

249. VA. CODE ANN. §§ 56-575.1 *et seq.*

tions, utility and telecommunications infrastructure, and recreational facilities, to name a few.²⁵⁰

ii. Federal

Despite the federal government's success in using the P3 model,²⁵¹ there is no formal legal structure at the federal level.²⁵² The Federal Highway Administration's Office of Innovative Project Delivery "encourages the consideration of public-private partnerships (P3s) in the development of transportation improvements."²⁵³ To that end, the Office of IPD provides expertise in the use of different P3 approaches, through several tools, primers and training.²⁵⁴ For example, the FHWA enacted the Special Experimental Project Number 15 (SEP-15 Program), which allows FHWA to experiment in four major areas of project delivery - contracting, right-of-way acquisition, project finance, and compliance with the FHWA's National Environmental Policy Act (NEPA) process and other environmental requirements.²⁵⁵

The U.S. House of Representatives and Senate are also considering several bills in 2014, which, among other things, would establish an entity that provides investment and financing for infrastructure projects, and develops a pilot project for P3 projects for the Army Corps of Engineers.²⁵⁶ The U.S. DOT has enacted MAP 21, which will allow the U.S. DOT to provide guidance to states for P3 legislation and projects.²⁵⁷

250. *Id.* at § 56-575.1

251. *See GSA Signs Lease for New Campus in Kansas City*, (NNSA Press Release), June 14, 2010, available at <http://nnsa.energy.gov/mediaroom/press-releases/kcrims061410>.

252. Hiroyuki Iseki, Jeanette Eckert, et al, *Task B-2: Status of Legislative Settings to Facilitate Public Private Partnerships in the U.S.*, University of California Berkeley California Path Program, (July 2009), at vii, available at <http://www.path.berkeley.edu/PATH/Publications/PDF/PRR/2009/PRR-2009-32.pdf>.

253. U.S. Dept. of Transp., *Public-Private Partnerships*, FEDERAL HIGHWAY ADMINISTRATION INNOVATIVE PROGRAM DELIVERY, <http://www.fhwa.dot.gov/ipd/p3/index.htm> (last visited Aug. 7, 2014).

254. *Id.*

255. U.S. Dept. of Transp., *Tools & Programs: SEP-15*, FEDERAL HIGHWAY ADMINISTRATION INNOVATIVE PROGRAM DELIVERY, http://www.fhwa.dot.gov/ipd/p3/tools_programs/sep15_faqs.aspx (last visited Aug. 7, 2014).

256. *See The Surety and Fidelity Association of America, Public-Private Partnership Legislation for 2014*, SURETY.ORG, <http://c.ymcdn.com/sites/www.surety.org/resource/collection/73672F79-BC99-45A3-BCD0-FB3EFF8080BA/P3-Legislation2014.pdf> (last visited Aug. 7, 2014).

257. U.S. Dept. of Transp., *Project Finance/P3 Questions and Answers*, FEDERAL HIGHWAY ADMINISTRATION MAP-21-MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY, http://www.fhwa.dot.gov/ipd/p3/tools_programs/sep15_faqs.aspx (last visited Aug. 7, 2014).

VI. Green Risks from P3 Delivery: the Next Frontier

Green building requirements add another layer of complexity to P3 projects simply because the requirements are continually changing.²⁵⁸ Generally, however, because the P3 model (using design/build or IPD) dovetails well with a green project's success, and given that most federal and state governments have sustainability requirements, it is entirely possible that eventually all buildings constructed under a P3 delivery mechanism will be green.²⁵⁹

A. P3 Issues for Design Professionals

The specific legal and risk management issues for design professionals on P3 projects are significant, yet still being analyzed by industry stakeholders.²⁶⁰ As a threshold matter, because the public entity that is the ultimate client/end user is shifting risk onto the private sector players forming the P3 consortium, that risk will likely flow all the way down to the designer, much like in a standard design-build project delivery mechanism.²⁶¹ However, because the contractual requirements on a P3 project are driven by the financing partners for the special purpose entity, the designer has far less room - and leverage - to negotiate terms.²⁶²

More troublesome, because the P3 consortium's financing partners are almost never in place at the time the special-purpose entity is formed - yet will dictate some of the more onerous terms from the design professional's perspective, such as heightened standards of care and whether any liquidated damages will apply - it is frequently the case that the designer will not know the terms with which it must comply until it has already agreed to participate in the consortium.²⁶³ For some firms, this can create an unacceptable level of risk that cannot be mitigated through contract negotiation because participation in the consortium is typically locked in prior to the negotiation of key terms.²⁶⁴ Indeed, if a designer negotiates contract terms from the

258. See Stephen Del Percio and Tracy L. Steedman, *Beyond LEED: Next Generation Green Issues For Design Professionals and Contractors*, Address Before the 2013 ABA Forum on the Construction Industry (September 27, 2013).

259. *Id.*

260. Stephen Del Percio, *The Top 5 Legal Issues for Building Green in Public-Private Partnerships*, GREEN REAL ESTATE LAW JOURNAL, (May 2, 2014), <http://www.greenrealestatelaw.com/2014/05/the-top-5-legal-issues-for-building-green-in-public-private-partnerships/>.

261. See generally *id.*

262. See generally *id.*

263. FMI: Management Consulting, *Investment Banking: for the Engineering and Construction Industry*, PUBLIC-PRIVATE PARTNERSHIPS: WHAT YOU NEED TO KNOW (2011), http://www.gilbaneco.com/uploadedFiles/Home/Gilbane/News_and_Events/Publications/2012/PPPWhatYouNeedToKnow.pdf.

264. See generally *id.*

back seat on a design-build project, it will be negotiating while holding onto the fender for dear life in a P3.²⁶⁵

Considered through the prism of a green building project that is required to pursue third-party certification - like the first case study presented below - a design firm should proceed with caution.²⁶⁶ Will the P3 lending partners demand a heightened warranty if the project occupant - like the GSA, for example - is obligated to occupy a building that earns a specific level of third-party certification? If so, and certification is not achieved, will the partners insist on a liquidated damages provision to ensure their revenue stream if the tenant cannot occupy the building until certification is achieved? And will those liquidated damages flow down to the designer in the design-build subcontract? These types of questions are theoretical at this point. But as P3 delivery becomes more pervasive, design firms will find themselves confronting them with increasing frequency.

B. P3 Issues for Contractors

P3s require sophisticated planning, estimating, designing and pre-construction services, in addition to the developing, financing, building, operating, and maintenance over the term of the agreement.²⁶⁷ Contractors will be faced with greater risks in terms of a longer life cycle, increased liability, and vulnerability to changes in external dynamics as the project progresses, such as changes in the public administration.²⁶⁸

More troubling is the shifting of certain costs and risks to the contractor which are usually borne by the public entity on typical design-bid-build projects, some of which are uninsurable.²⁶⁹ For example, upfront costs for the design and development, geotechnical and soil conditions, differing site conditions, cost overruns, and all types of delays not caused by the contractor.²⁷⁰ Those caused by outside agencies, zoning changes or other laws that affect the project, public interference, unknown utility or historical conditions, and long-term warranty obligations are all significant risks that the contractor may be required to assume in the P3 program.²⁷¹

Contractors face numerous, unique challenges (aside from creative financing and a strong balance sheet): finding experienced partners with a deep understanding of the collaborative effort needed to successfully perform a P3; guiding the owner to present a clear vision and program that also has the requisite political and public support; man-

265. See generally *id.*

266. See generally *id.*

267. See generally *id.*

268. *Id.* at 5.

269. *Id.*

270. *Id.* at 5 fig. 3.

271. *Id.*

aging expectations of the stakeholders with effective communication channels and transparency; and increased competition as experienced international contractors begin entering the domestic U.S. P3 market.²⁷²

VII. Case Studies - Green Building Projects Delivered by P3 Mechanism

By no means an exclusive list, below is a series of green building projects delivered by P3 meant to highlight some of the risks discussed above.

A. *General Services Administration - National Nuclear Security Administration (Kansas City) LEED Gold Manufacturing Operations Campus*

In 2010, the General Services Administration's Heartland Region signed a lease agreement with CenterPoint Zimmer LLC for a new LEED Gold campus development to house the National Nuclear Security Administration's manufacturing operations for the Kansas City area.²⁷³ The lease allowed Zimmer to proceed with construction of the campus - projected to be in the neighborhood of \$675 million- and replace NNSA's outdated existing plant but preserve 2,500 jobs.²⁷⁴ Zimmer is receiving annual lease payments of \$61.5 million over 20 years.²⁷⁵ It is a net lease - meaning that NNSA is responsible for paying its own utility costs. For Zimmer, the value of the contract over its lifetime is \$1.25 billion.²⁷⁶

The NNSA project suggests some interesting hypothetical questions about the interplay between LEED certification and green building benefits that might eventually play out in a P3 setting.²⁷⁷ For example, suppose NNSA's utility costs in the new LEED Gold campus exceed its expectations, or some other problem arises related to the project's green design features or LEED certification.²⁷⁸ Would the lease provide the agency with some remedy against CenterPoint Zimmer? If so, could Zimmer pass through that liability to the various

272. *Id.* at p. 9.

273. *GSA Signs Lease for New Campus in South Kansas City*, NATIONAL NUCLEAR SECURITY ADMINISTRATION, <http://nnsa.energy.gov/mediaroom/pressreleases/kcrims061410> (last visited Aug. 10, 2013); see Chris Cheatham, *How Public-Private Partnerships Can Boost Green Building*, GREENBIZ.COM (July 22, 2010), <http://www.greenbiz.com/blog/2010/07/22/how-public-private-partnerships-can-boostgreen-building>.

274. *GSA Signs Lease for New Campus in South Kansas City*, NATIONAL NUCLEAR SECURITY ADMINISTRATION, <http://nnsa.energy.gov/mediaroom/pressreleases/kcrims061410> (last visited Aug. 7, 2014).

275. *Id.*

276. *Id.*

277. Chris Cheatham, *How Public-Private Partnerships Can Boost Green Building*, GREENBIZ.COM (July 22, 2010), <http://www.greenbiz.com/blog/2010/07/22/how-publicprivate-partnerships-can-boost-green-building>.

278. *Id.*

members of its project team? Unraveling the complex web of claims that this fact pattern might implicate quickly becomes challenging, particularly in an environment where P3 delivery is still novel.²⁷⁹

For the designer – who is frequently at the bottom of the contracting chain, whether in a design-build or a P3 delivery mechanism – insisting on some sort of cap on the potential damages that might flow down to it – whether liquidated or a hard cap on all damages – is critical to preserving the bottom line.²⁸⁰ More generally, design professionals should remain vigilant that blanket flow downs of contract terms do not create unexpected – or uninsurable – risks.²⁸¹ Upstream, a contractor may be comfortable agreeing to a warranty or guarantee related to the quality of construction.²⁸² But it is problematic if those same terms apply to the designer. Accordingly, educating P3 consortium members about roles, responsibilities, and allocation of risk will remain an important challenge for designers as they consider participating on P3 projects – whether those projects contain a green building component or not.

B. Governor George Deukmejian Court House, Long Beach, CA

Los Angeles County's Governor George Deukmejian Court House, which opened in September 2013, was constructed under the design/build/finance/operate/maintain (DBFOM) model, under a 35-year agreement (a lease-leaseback) with Long Beach Judicial Partners LLC (aka Meridian Infrastructure) (LBJP), and is LEED Silver certified.²⁸³ LBJP paid 49 million dollars cash equity at closing and was central in selecting members of the consortium for the 490 million dollar project.²⁸⁴ This is the first P3 consisting of all U.S. companies, and according to Clark Design/Build of California, the design-builder, the P3 agreement consisted of more than 5,000 pages.

The Judicial Council of California will own the building, and the Superior Court of Los Angeles County will occupy approximately eighty percent of the space.²⁸⁵ The remaining space will be leased by other county agencies and retail and commercial companies.²⁸⁶ For its investment, the JCC will pay LBJP an annual, performance-based infrastructure (PBI) service fee for 35 years, totaling \$2.3 billion.²⁸⁷

279. *Id.*

280. *See generally*, Michael Dew, *Risks flow downhill? Managing risks in P3 projects*, LEGAL TREE, (December 24, 2006) <http://legaltree.ca/node/777>.

281. *Id.*

282. *Id.*

283. *See generally*, Long Beach Court Building, *Governor George Deukmejian Court-house, Project Update: Winter 2013* (2013), 2, http://www.longbeachcourthouse.com/files/LBCH_Winter_2013_Newsletter_ElectCopy.pdf.

284. *Id.*

285. *Id.*

286. *Id.*

287. *Id.*

The PBI method involves deductions from payments to the consortium on a daily basis for items that are not functioning properly or for rooms that are not available, also called “availability deductions”. For instance, if light bulbs are out, the penalty may be \$50/day, and if the HVAC is not working, it may be \$50,000 a/day. As a consequence, because the risk of the building’s performance and maintenance costs are shifted entirely to the consortium, the project team was incentivized from the beginning to deliver a better quality, high-performing building with lower operation and maintenance costs from inception.

The potential penalties over the life of the agreement required the contractor and the rest of the project team to think collaboratively and creatively to reduce waste and costs and to solve other building life-cycle issues. For example, when the contractor realized that certain light bulbs would require three-story scaffolding to be constructed to replace the bulbs, which would be costly, the consortium was able to convince the owner that LED lights would be a better option for long term maintenance.²⁸⁸ Further, to avoid the failure of the HVAC system on any given day, AHUs were tied together to work at 60 percent capacity.²⁸⁹ If one failed, the others could increase their capacity to serve the building, while the non-functioning one was serviced.²⁹⁰ Surprisingly, these ideas, among others, were not presented in terms of earning LEED points but arose simply because of the potential increased maintenance costs and payment deductions to the consortium. Logically, because of the liability that the SPE consortium assumes long-term, the implementation of P3 project through IPD almost guarantees that a building will be more energy efficient and less costly to operate and maintain.

C. Maryland House I-95 Travel Plaza, Maryland

Opened to the public on January 16, 2014, the reconstructed Maryland House on I-95 between Baltimore County and Harford County, was the first P3 under Maryland’s enabling legislation passed in April 2013, which is slated to achieve LEED Silver.²⁹¹ It is part of a larger project that includes the Chesapeake House, another travel plaza located further north on I-95 in Cecil County, Maryland, which will be completed at a later date.²⁹² Areas USA MDTP, LLC, the concessionaire, under a DBFOM agreement, is leasing the land (for both plazas)

288. Long Beach Court Building, *Governor George Deukmejian Courthouse, Project Update: Winter 2013* (2013), 2, http://www.longbeachcourthouse.com/files/LBCH_Winter_2013_Newsletter_ElectCopy.pdf.

289. *Id.*

290. *Id.*

291. Maryland Transportation Authority, *MDTA Announces Public-Private Partnership to Redevelop & Operate I-95 Travel Plazas*, <http://www.i95mdtravelplazas.com/mdta-announces-public-private-partnership-to-redevelop-a-operate-i-95-travel-plazas> (last visited Aug. 7, 2014).

292. *Id.*

for 35 years and will operate and maintain the new facilities until 2047.²⁹³ The state maintains ownership and oversight of the plazas, and, while accepting financial responsibility for environmental remediation of the properties before leasing, Areas USA accepted full responsibility for bringing the property into compliance with environmental rules and regulations.²⁹⁴ Areas USA's expected investment for redeveloping and rebuilding the facilities is between 56 million dollars and 65 million dollars.²⁹⁵ The state estimates that it will receive \$400 million over the life of the agreement.²⁹⁶ The state's lease receipts are based on several tiers of gross revenue, ranging from 10-15 percent of revenue generated by the facilities.²⁹⁷

Among the strategies implemented by the architect and contractor to save operation and maintenance costs were: 1) the use of a sophisticated lighting system that requires no artificial light to be used during the day in the dining areas of the facility; 2) no potable water used for irrigation or landscaping; and 3) a thirty percent water use reduction (which is a substantial reduction for a dining facility).²⁹⁸ Among the risks transferred are the design and construction risks, design liability, completion risk, construction costs overruns, operation and maintenance risks and costs overruns, regulatory compliance, and capital maintenance.²⁹⁹

VIII. Conclusion

P3 green buildings are a relatively new concept in the United States because the majority of P3s to date have been implemented to construct bridges and highways. As the federal government and other state and local entities become more familiar with P3 project delivery, design firms and contractors will see an uptick in green building projects delivered by P3. Those familiar with the green building movement know that the integrated project delivery model has been promoted since green building became mainstream. Thus, design professionals and contractors who fail to embrace the culture of cooperation and collaboration required for the success of these projects

293. *Id.*

294. *Id.*

295. *Id.*

296. *Id.*

297. Maryland Transp. Authority and Maryland Dept. of Transp., *A Report to the Maryland General Assembly Senate Budget and Taxation Committee and House Appropriations Committee Regarding Public-Private Partnership for the I-85 Travel Plazas Description of the Proposed Lease and Concession Agreement* (2012), http://www.i95mdtravelplazas.com/images/partnership_announcement/travel_plaza_report%20_final.pdf.

298. Maryland Transportation Authority, *MDTA announces public-private partnership to redevelop & operate I-95 Travel Plazas*, <http://www.i95mdtravelplazas.com/mdta-announces-public-private-partnership-to-redevelop-a-operate-i-95-travel-plazas>.

299. Maryland Transp. Authority and Maryland Dept. of Transp., *supra* note 297.

will most likely lose market share and become obsolete. Understanding the green building-related risks contained in P3 contract documents will be a particularly important consideration on projects for public owners like the GSA, for example, which have a green building mandate in place.

Green building practices have still yet to produce the volume of litigation and liability that many predicted. Nonetheless, their implementation in the P3 context may ultimately cause design and construction firms to consider new risk profiles for the P3 paradigm – in the green building context and otherwise.